

Manufacturers Record

Industry Construction

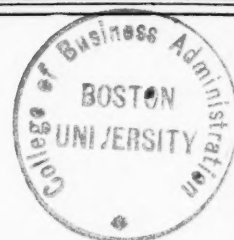
Reg. U. S.



\$6.50 per Year.
Single Copy, 20 Cents.

Baltimore, Md.
NOVEMBER 20, 1930

Thanksgiving



Next week we observe Thanksgiving. It should be more than a harvest festival. It is little indeed that we do in officially allotting this one day in the year for the purpose of giving thanks for our blessings. The real spirit of Thanksgiving too often is lost in the scramble for gold. We are likely to complain because of the lack of things we think we ought to have, rather than to be grateful for the comforts which we enjoy as a matter of course. Yet we should not let greed drive from our hearts our gratitude for the material blessings of a beneficent Providence.

When the Pilgrims introduced the custom of holding a harvest festival in the New World in 1621 and when, in 1735, General Oglethorpe first officially set aside in the Georgia colony a special Thanksgiving Day, there was rejoicing over the possession of bare necessities. These old-time folks were thankful that their very lives had been spared in the rigorous fight for existence. Since that day humanity has progressed far in its battle against disease, in its protection of life and property, and in its development of bodily comforts, and of all things that make for mental and spiritual well-being. We in this age have indeed real reason to be thankful.

With bountiful harvests; with much of the world's wealth; with higher living standards than in any period of the past; with a greater effort being made to relieve poverty and distress of mind and body; with an organized and stable government; with peace prevailing between ourselves and other nations, we are blessed today far beyond the blessings enjoyed by other peoples.

Let us pause and consider these blessings, and with the spirit of Thanksgiving in our hearts let us go forward to greater achievements with an unshakeable faith in the future of our great land.



Ash Basement Cleaned Once a Month

At the new heating plant of the Pennsylvania Railroad at West Philadelphia, ashes are discharged twice a day and dust and siftings twice a week.

Cleanliness is the watchword in this plant, but due to their Hydrojet System of Ash and Dust Removal, it is only necessary to clean the ash basement about once a month. Total enclosure of the system prevents the escape of dust, spillage of ashes or leakage of water.

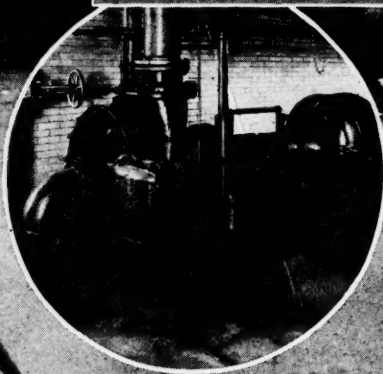
The square insert shows the A-S-H Feed Plate Valves which handle the siftings, while the main illustration shows the clinker chamber of the Hydrojet, in which the ashes accumulate, beneath each of the stoker fired furnaces.

The cover plates above the discharge trench are also shown. The refuse is carried by high pressure water streams in this trench beneath the floor, and discharged to a sump outside the building. The ashes remain in the sump and the water passes through a series of baffles and is recirculated through the system by the A-S-H Horizontal Pumping Unit shown in the round insert.

Cleanliness is symbolical of efficiency, simplicity, and economy. For further information, address the ALLEN-SHERMAN-HOFF CO., 223 S. 15th Street, PHILADELPHIA. Offices in Principal Cities.

HYDRO JET

Nothing Moves but the Ashes



Pump your Ashes!

at PENNSYLVANIA RAILROAD

THE GUARANTEED WAY TO HARDEN CEMENT FLOORS

We Guarantee Every Sonneborn Job

If our inspection shows a floor is not so greatly deteriorated that a good hardening job is still possible—If Lapidolith, the original concrete floor hardener, is used—If a Sonneborn Service Crew applies Lapidolith—We guarantee such floors to remain wearproof and dustproof for a period of years, dependent on specific conditions of use.

YOU cannot afford to ignore such money-saving facts as these where the care of your concrete floors is concerned.

Since the discovery of Lapidolith by Sonneborn, over 952 million square feet of concrete floors all over the country have been Lapidolized—made harder, tougher, wear-proof, dustproof, washable—and for years.

Here's what one big industrial user writes: "Five years ago we treated all our floors—altogether about 80,000 square feet—with Lapidolith, and your product has done all that you claimed it would do, as it has developed a marble-like finish which is

not only dustproof and wear-proof but also water- and oil-proof."

Lapidolith is a liquid chemical compound that penetrates the porous cement and binds the loose particles together into a hard and dustless mass. Easy to apply—any workman can do it with a long-handled brush. Dries over night. Once on, becomes a part of the floor itself and resists time, wear, chemicals, oil, and other floor-wrecking conditions.

Tell us the condition of your floors and what areas you have to treat. Send the coupon for complete detailed information and letters from satisfied users.

L. SONNEBORN SONS, INC., Dept. 37. 114 Fifth Avenue, New York

OTHER PROTECTING PRODUCTS BY SONNEBORN

HYDROCODE COLORLESS

— for waterproofing exterior of exposed walls.

CEMCOAT

— an exterior or interior wall coating that stays white and can be washed endlessly.

LIGNOPHOL

— for preserving and waterproofing wood floors.

L. Sonneborn Sons, Inc.,

M.R.

Dept. 37, 114 Fifth Ave., New York.

We are interested in receiving information about your paint for—

Building Exteriors.....; Building Interiors.....;
Floors.....; Wood Work.....; Resisting Fumes.....;
Acid-Proof.....; Structural Steel.....; Boilers and
Stacks.....; Pipes.....; Machines.....; Engines
.....; Tanks.....

Name.....

Address.....

Company.....

Position.....



A GREAT WHEEL BACK OF HIS JOB

FOR ten years or more the tool makers in many a plant have had this wheel working for them. A wheel that is another definite Carborundum contribution to Industry.

In the building of this wheel we start with specially developed Aloxite Brand Aluminum Oxide—an abrasive deliberately planned to have the very characteristics needed for tool room grinding.

This Aloxite "AA" is 99% pure aluminum oxide. Its crystals are much larger than the ordinary aluminous abrasive. It fractures with a keen, sharp angularity giving a wheel of unprecedented sharpness. And the production of such an abrasive grain is, of course, under absolute control.

Because of its open, porous structure—its scientific bonding—this "AA" wheel cuts free, clean and cool—and it stays sharp.

It, of course, carries a grade symbol as all Carborundum-made wheels have from the inception of the company. These symbols are not at all mystical or confusing. They are a clear, logical guide to our wheel makers—guides that enable them to give you just the wheel you want—and then to duplicate it time after time.

Aloxite "AA" will take light cuts or deep cuts—far deeper than the ordinary wheel—without undue heating—without drawing the temper.

Truly it is a great wheel, worthy of a trial in your tool room.

ALOXITE BRAND "AA" The Improved Tool Room Wheel

REG. U. S. PAT. OFF.

MADE ONLY BY

The Carborundum Company, Niagara Falls, N. Y.

REG. U. S. PAT. OFF.

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Sales Offices and Warehouses in New York, Chicago, Boston, Philadelphia, Cleveland, Detroit, Cincinnati, Pittsburgh, Milwaukee, Grand Rapids, Toronto, Ont.
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(CARBORUNDUM AND ALOXITE ARE THE REGISTERED TRADE MARKS OF THE CARBORUNDUM COMPANY)



**LOWER POWER
CONSUMPTION**

▲
**EFFECTIVE
DIRECT DRIVE**

50 H. P. Unit—324 cubic feet per
minute—100 pounds pressure



**V-Type Water Cooled
COMPRESSOR OUTFITS**
Synchronous Motor Driven

**POSITIVE
DRIVE OIL PUMP**

▲
**FORCE FEED
TO MAIN AND
CONNECTING
ROD BEARINGS**

▲
**QUIET OPERATION
AND SAVING IN
FLOOR SPACE**

▲
**LARGER COOLING
CAPACITY**

GARDNER-DENVER COMPANY
QUINCY, ILLINOIS

Branches in all Principal Cities

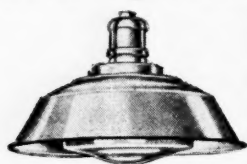
v-wcd-1

GARDNER-DENVER

Waste lurks in the Twilight Zone*



RUINED materials and defective workmanship are danger signals . . . where they persist, beware of twilight zone lighting. For blundering errors are unavoidable in the partial darkness of the twilight zone. Its half-light makes easy tasks



difficult because so many of the factors that make complete darkness a handicap are present in this illumination that, to a casual observer, seems to offer all the advantages of correct light.

There is a scientifically established standard of correct lighting for factory operations



On MAZDA Avenue

In the Westinghouse Lighting Institute a fully equipped factory scientifically demonstrates every type of industrial lighting —

Open to visitors

Daily 9 to 5 — Saturday 9 to 12
7th Floor, Grand Central Palace,
New York City
—around the corner from your hotel

of every kind. Adoption of these standards eliminates the hazards of twilight zone lighting . . . makes available to you all the benefits of good lighting.

Westinghouse lighting specialists can suggest ways to use light profitably. One of these trained men is ready to discuss your lighting problems with you.

The way out of the Twilight Zone

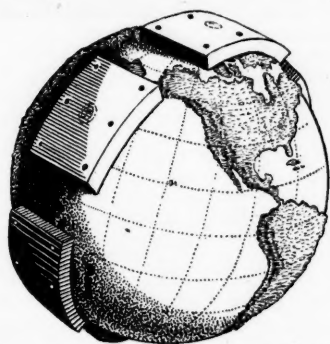
For those interested in using light effectively an interesting illustrated booklet, "The Way Out of the Twilight Zone," is available. Write for a copy to the Westinghouse Lamp Company, Department 203, 150 Broadway, New York, N. Y.

*The deceptive half-light between obvious darkness and adequate illumination.

Westinghouse Lighting Specialists will help you plan an effective lighting system

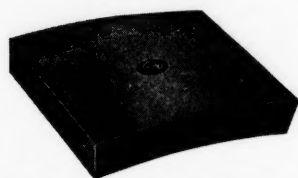
Westinghouse



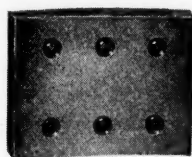


"Palmer Brake Blocks Could Stop the Earth"

Braking is sure and *speedy* with Palmer Molded Brake Blocks



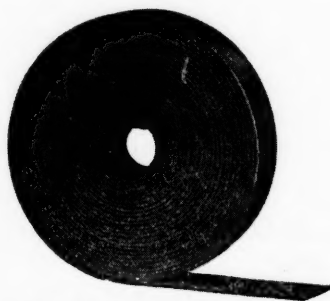
Palmer Molded Brake Blocks are accurately formed by steel molds under tremendous hydraulic pressure.



All holes are very accurately molded, not drilled. This prevents cutting the grain and weakening the block.



Palmer Molded Brake Blocks are made in any size or shape for any make or model of equipment. They last twice as long as ordinary wood or composition blocks.



Palmer Hydraulic Brake Lining has been proved by the hardest kind of service to be superior to all others in long life, braking efficiency and economy.

POSITIVE, safe and long-lived, Palmer Blocks give the sureness and speed in braking that operators want for fast and steady work. These blocks are made of high-grade asbestos by the exclusive PALMER method and are formed with a special binding compound under tremendous hydraulic pressure. They provide maximum friction in use because they contain the maximum amount of the best braking material known. They are compact, uniform in structure, non-charring, and impervious to oil, water and grit.

The next time you have to put brake blocks on steam shovels, dredges, hoists or cranes, be sure to specify Palmer. Remember that it costs at least half as much for the labor required to renew brake blocks as it costs for the blocks themselves. Palmer Blocks wear more than twice as long as ordinary composition blocks and pay for themselves in renewal labor saving alone.

Write for detailed information or send specification of blocks desired, for prices.

Some Users of Palmer Brake Products

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Bucyrus Co.
Link-Belt Co.
Fairbanks Morse Co.
Monighan Machine Co.
Interstate Iron & Steel Co.
Thew Shovel Co.
Lehigh Coal Co.
Ohio Locomotive Crane Co.

W. A. Jones Foundry & Machinery Co.
Chicago, Burlington & Quincy Ry.
Chicago, Milwaukee & St. Paul Ry.
Chicago & Northwestern Railroad
Austin Machinery Corp.
Western Electric Co.
U. S. Steel Corp.

Palmer Asbestos & Rubber Corporation

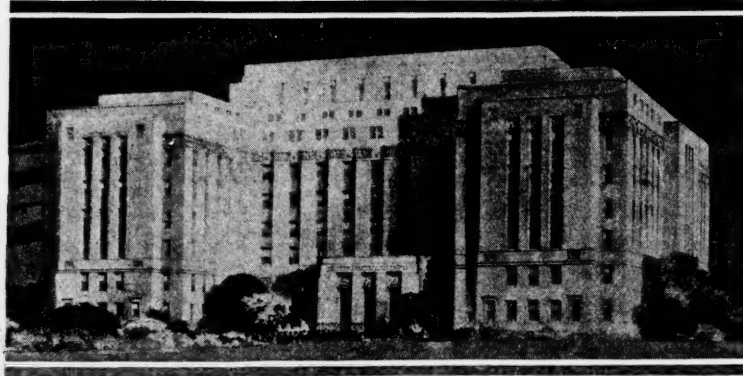
General Office—Chicago

Factories

CHICAGO, ILL.

LOUISVILLE, KY.

THE LARGEST MANUFACTURERS USE PALMER BLOCKS & LINING



Jefferson County Court House, Birmingham

Architects—Holabird & Root
Associate Architect—Harry B. Wheelock
Fabricators—The Ingalls Iron Works Company
Contractors—Southern Ferro Concrete Company

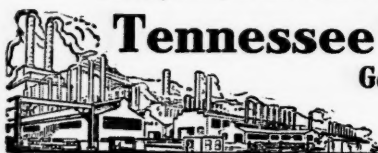


The Sinews

for the South's Buildings are wrought from
TENNESSEE
STEEL

The Jefferson County Court House at Birmingham is still another imposing civic monument in the erection of which Tennessee Structural Steel has played an important part.

Sturdy, finely proportioned dignity—superior strength—fire-safeness—enduring value—have been attained in this and countless other structures of every conceivable size and type, from coast to coast, through the use of Tennessee Products which include not only structural shapes, plates and bars, but a full line of sheets, rails, track accessories, semi-finished steels and pig iron.



Tennessee Coal, Iron & Railroad Company

General Offices: Brown-Marx Building, Birmingham, Ala.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION



AMERICAN BRIDGE COMPANY
AMERICAN SHEET AND TIN PLATE COMPANY
AMERICAN STEEL AND WIRE COMPANY

Pacific Coast Distributors—Columbia Steel Company, Russ Bldg., San Francisco, Calif.

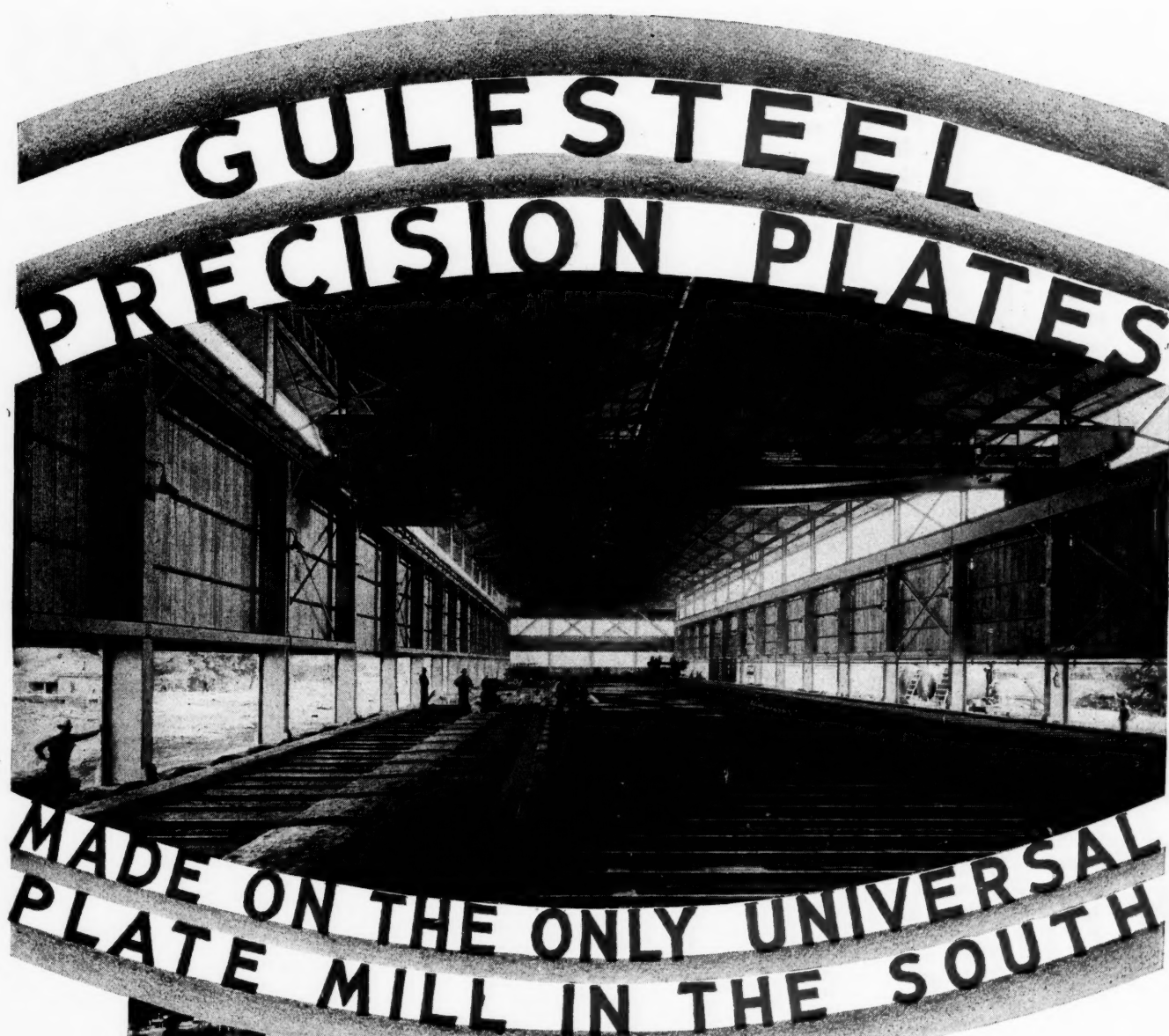
CARNEGIE STEEL COMPANY
COLUMBIA STEEL COMPANY
CYCLONE FENCE COMPANY



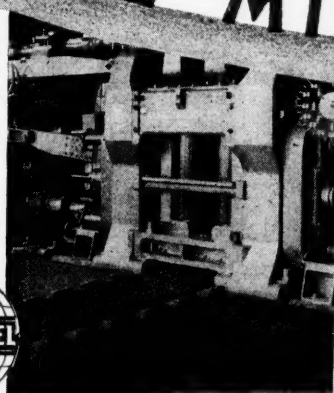
FEDERAL SHIPB'LDG. & DRY DOCK CO.
ILLINOIS STEEL COMPANY
NATIONAL TUBE COMPANY

Export Distributors—United States Steel Products Company, 30 Church St., New York, N.Y.

THE LORAIN STEEL COMPANY
TENNESSEE COAL, IRON & RAILROAD CO.
UNIVERSAL ATLAS CEMENT COMPANY



REG. U. S.
PAT. OFF.



IN buying GULFSTEEL *Precision* Plates, you are assured of a product accurately rolled and sheared—*physically right, metallurgically right*. Made of specially selected *copper-bearing* steel, they resist corrosion, form readily and

weld smoothly. Southern users of plate can expect better service from GULFSTEEL because of our location in the heart of the South's steel center. Send us your inquiries. We will efficiently care for your plate requirements.

GULF STATES STEEL COMPANY

BIRMINGHAM, ALABAMA

Pig Iron
Billets
Slabs

Wire Rods
Bars
Angles

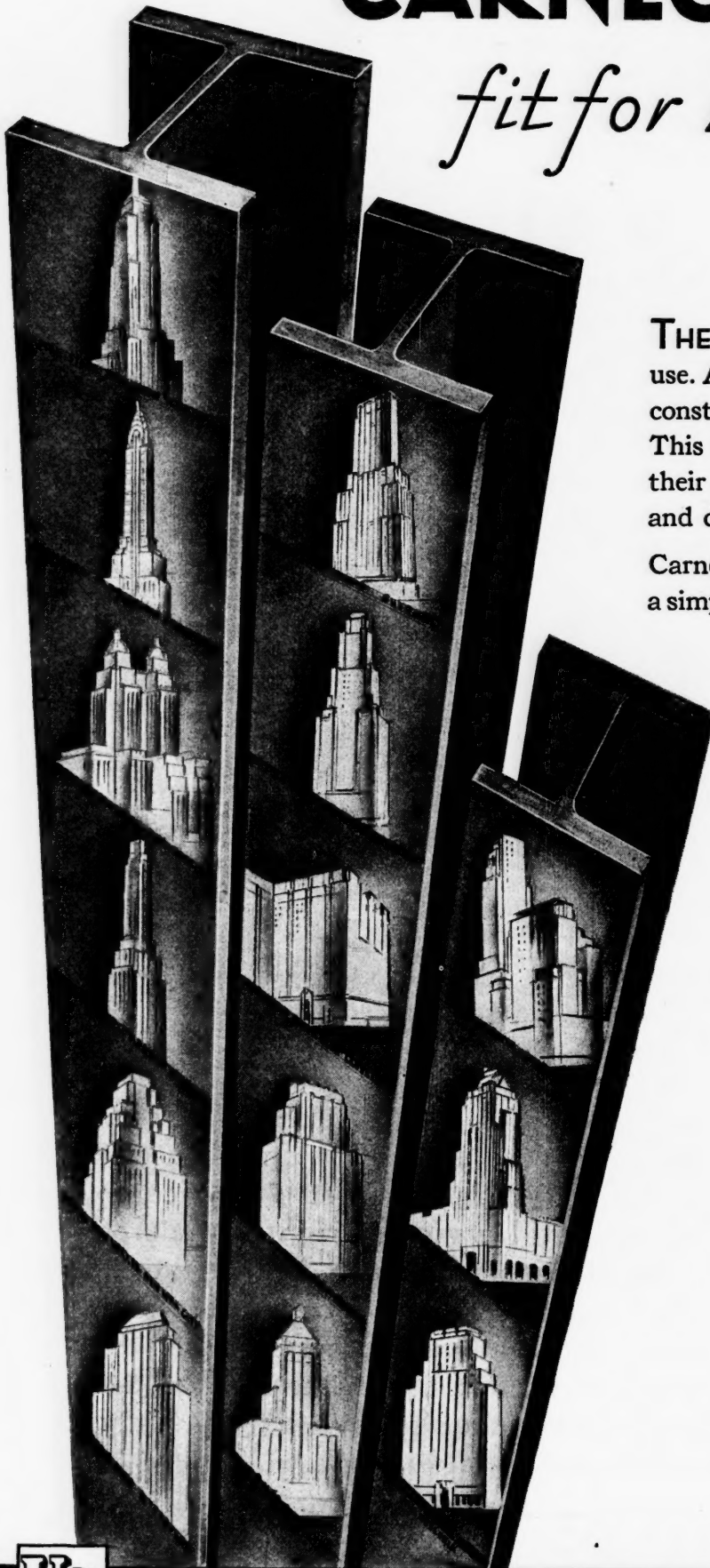
Plates—Sheared and Universal
Sheets—Black, Blue
Annealed and Galvanized

Bright and Annealed Wire
Galvanized Wire
Barbed Wire

Wire and Rods, Straightened and Cut
Woven Wire Fence
Nails (all kinds)
Staples
Bale Ties

CARNEGIE BEAMS

fit for **ANY** *job*



THE merit of a material is proved in its use. A conspicuous feature in recent, notable construction is the use of Carnegie Beams. This popularity is the best indication of their adequacy to the needs of architects and designers—their fitness for the job.

Carnegie Beams bring to steel construction a simplicity of detail, a facility of fabrication and erection, and a flexibility of design never before possible. Wide parallel flanges, obtainable in Carnegie Beams only, simplify very markedly the great variety of connections necessary in fabrication. Constant-depth columns afford opportunities for duplication, both in design and erection. Due to the wide variety of sections and weights you will always find a Carnegie Beam which closely approximates the theoretical strength required.

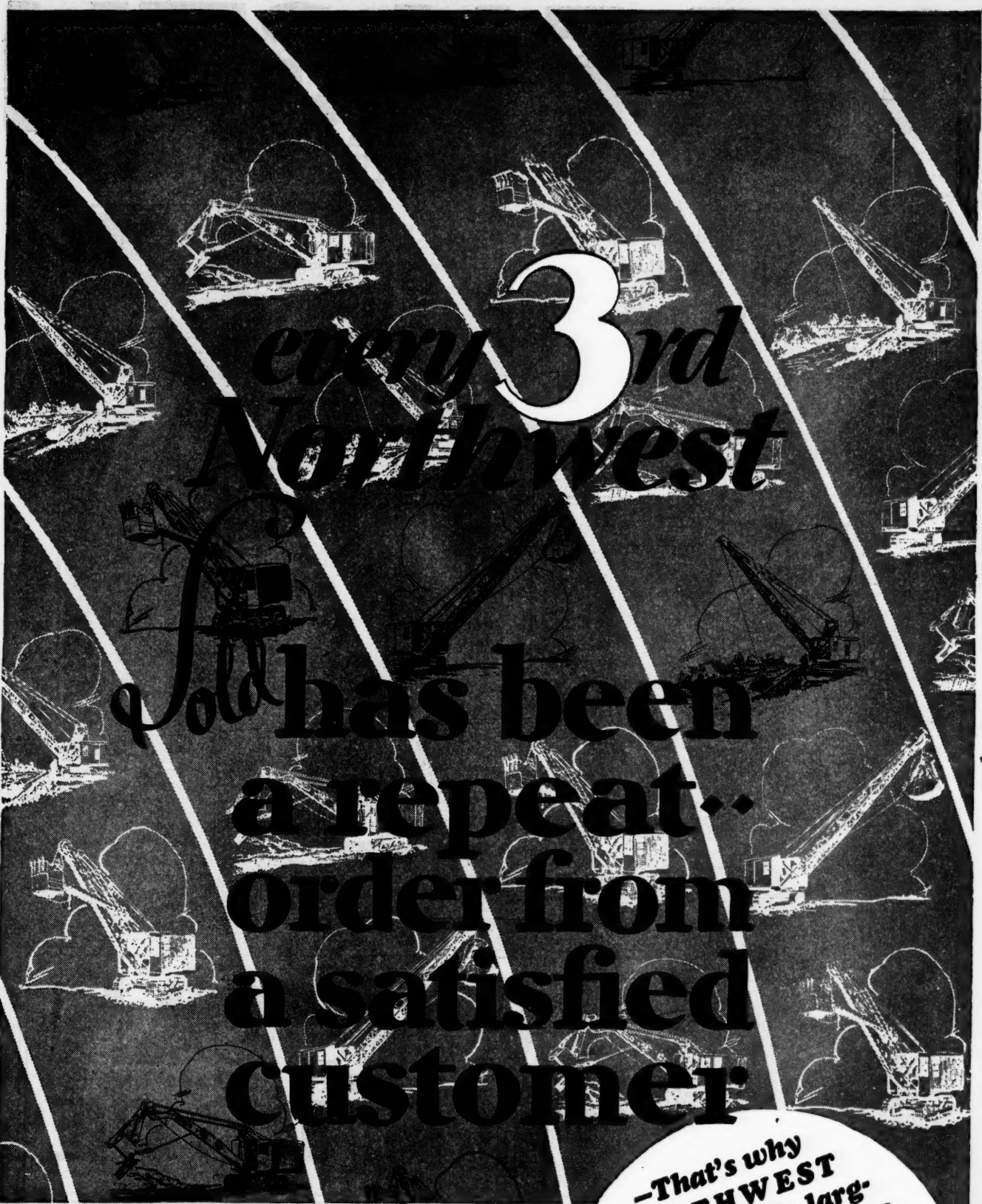
Carnegie Beams merit the investigation of any one interested in efficient and economical construction. The advantages of these sections apply to any type of construction involving the use of structural steel, regardless of size or type of architecture. Carnegie engineers are always at your service.

90



CARNEGIE STEEL COMPANY » » PITTSBURGH

Subsidiary of United States Steel Corporation



every 3rd
Northwest

Job has been
a repeat...
order from
a satisfied
customer

Northwest Engineering Company

The world's largest exclusive builders of gasoline, oil burning and electric powered shovels, cranes and draglines

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1221 S. Lamar St.,
Dallas, Texas.

1100 Milby St.,
Houston, Texas

816 Howard Ave.,
New Orleans, La.

NORTHWEST

MR 11-20 Grav

-That's why
NORTHWEST
is the world's larg-
est exclusive builders
of gasoline and elec-
tric powered shovels,
cranes, draglines,
pull-shovels and
skimmer scoops

STRENGTH

SO MUCH depends on safety, especially in congested city areas, that surplus strength has been built into American Wire Rope. Our engineers are at your disposal. Let them help you select the proper construction of wire rope for your requirements.



AMERICAN
STEEL & WIRE COMPANY
WIRE ROPE

AMERICAN STEEL & WIRE COMPANY

208 S. La Salle Street, Chicago

Other Sales Offices: Atlanta Baltimore Birmingham
Denver Detroit Kansas City Memphis Milwaukee
Pittsburgh Salt Lake City St. Louis

Pacific Coast Distributors: Columbia Steel Company,
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SUBSIDIARY UNITED STATES STEEL CORPORATION



30 Church Street, New York
Boston Buffalo Cincinnati Cleveland Dallas
Minneapolis-St. Paul Oklahoma City Philadelphia
Wilkes-Barre Worcester

Export Distributors: United States Steel Products Co.,
30 Church St., New York City

MADE OF STEEL
BUTLER

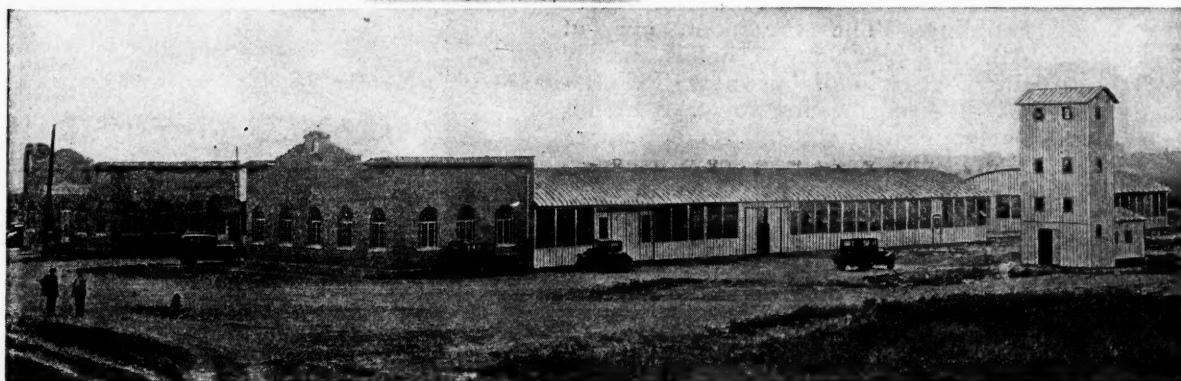
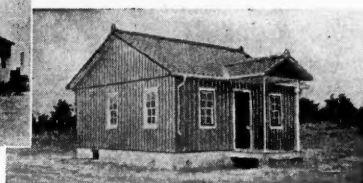
Duplex Bungalow



Cottage



Field Office



Above—Factory



READY-MADE
STEEL
BUILDINGS

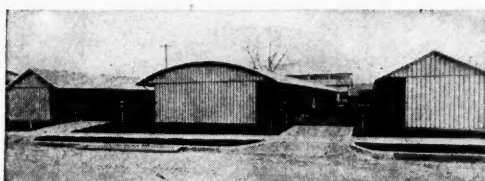
SAVE

For All Branches of Industry

THERE is a distinct saving in their first cost as compared to any other non-combustible construction. Complete materials in ready-made, standardized structural units make possible quick and economical installation. Made entirely of steel, of steel and stucco or of steel and masonry—further savings are assured through low maintenance and small depreciation charges.

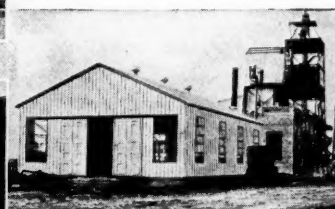
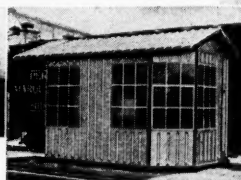
In one industry Butler Ready-Made Steel Buildings contributed to a two-thirds reduction in fire insurance rates. Enlargement at any time is only a matter of joining on standardized units of the necessary dimensions. The same features that contribute to quick and simple erection facilitate taking down and re-erection with no more loss than a few dropped bolts. Insulation with commercial wall board or plaster secures the comfort necessary where skilled workers are involved. The structural strength of steel, multiplied by Butler methods of shaping, gives to Ready-Made Steel Buildings characteristics of permanence which save you all thoughts of rebuilding for many years to come.

A new book picturing installations of many types of Butler Ready-Made Steel Buildings awaits the request of interested officials.

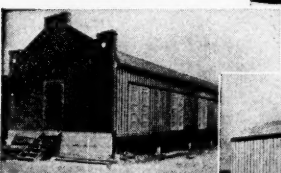


At Left—Parking Station

Below—Gasoline Refinery

At Right—Railway
Scale House

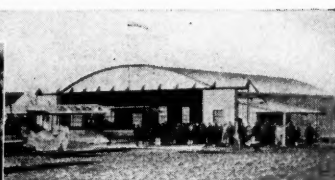
Above—Mine Building



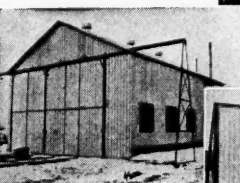
Freight Depot



Corn Crib



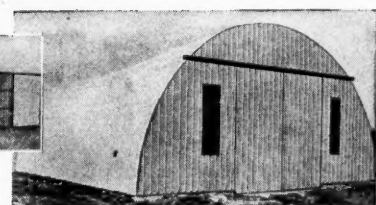
Airplane Hangar



Mine Building



Airplane Hangar

Above—Farm Machinery Shelter
Below—Bus and Truck GarageAbove—Oil Well
Service PlantAt Left—
Processing Plant

BUTLER MANUFACTURING COMPANY

1238 EASTERN AVE.,
KANSAS CITY, MO.



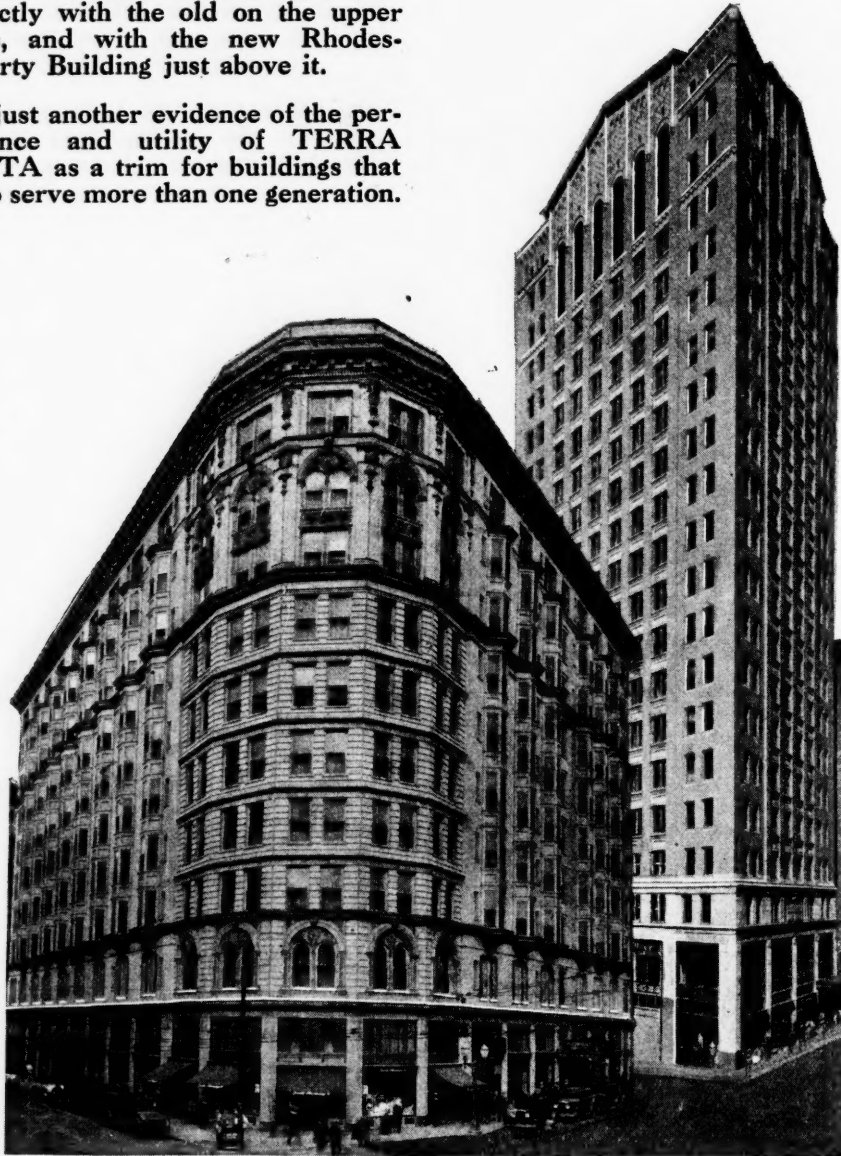
938 SIXTH AVE. S. E.,
MINNEAPOLIS, MINN.

For Buildings of Permanence

—use TERRA COTTA

THE adaptability of TERRA COTTA is strikingly shown by its use on the remodeled Piedmont Hotel and the new Rhodes-Haverty Building. The Piedmont, one of Atlanta's best known hotels, nearly thirty years old, has new TERRA COTTA on the first story. It blends perfectly with the old on the upper floors, and with the new Rhodes-Haverty Building just above it.

It is just another evidence of the permanence and utility of TERRA COTTA as a trim for buildings that are to serve more than one generation.



Pringle & Smith were Architects and Southern Ferro Concrete Co. Builders for both projects.

Atlanta Terra Cotta Company

Glenn Building

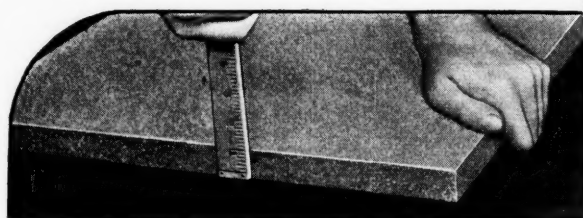
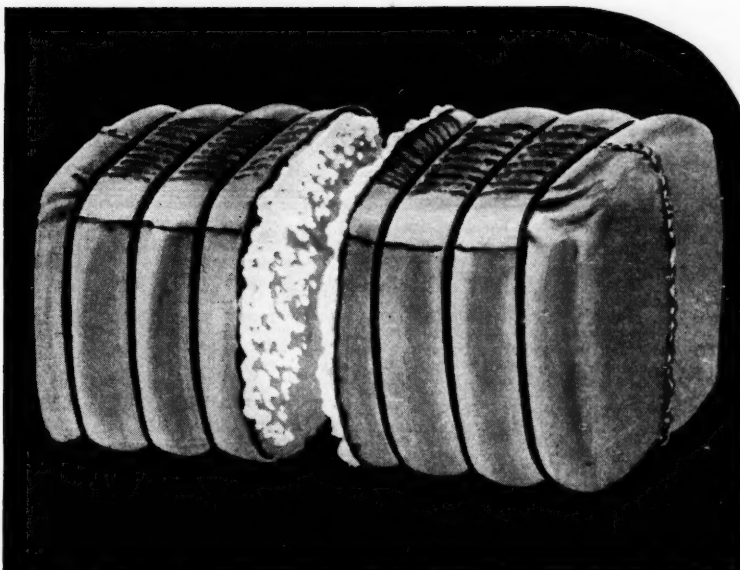
Atlanta, Georgia

Factory at East Point, Georgia

Southern Factory of
Atlantic Terra Cotta Company
19 West 44th Street
New York

Southwestern Office
A. P. Clark, District Manager
Praetorian Building
Dallas, Texas

YOU DON'T BUY TWO HALF-BALES TO GET ONE BALE OF COTTON



Temlok's
SOLID INCH

GIVES YOUR ROOF ECONOMICAL INSULATION —

in one layer

HAVE you wondered why you buy two half-inch insulating boards to get a full inch of insulation for your roof? It does seem impractical.

But you needn't now. TEMLOK, Armstrong's new low-cost board, offers you one *solid inch* of protection. One layer of insulation, without joint or lamination, now provides the better way to guard your mill roofs.

Qualities that are important

Armstrong's TEMLOK is more than just an ordinary insulating board made in double thickness. It provides many distinct advantages. Made of the long, golden fibres of Southern pine, TEMLOK'S conductivity is

.31 B. t. u. per square foot, per inch thickness, per degree Fahrenheit temperature difference, per hour, at 60 degrees mean temperature. It is moisture-resistant, and mould-proof, too.

Easily, quickly applied

TEMLOK comes in standard sizes—easy to handle, clean to cut. Your builder will appreciate this feature. And your budget will appreciate the fact that it costs no more than less efficient boards.

It will pay you to remember Armstrong's TEMLOK the next time you think of insulation. For complete details and a sample write to: Armstrong Cork & Insulation Company, 944 Concord St., Lancaster, Pennsylvania.

Armstrong's Temlok

The solid inch of low-cost roof insulation

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ENGINEERS

CHEMISTS

GEOLOGISTS

CHEMICAL ENGINEERS

ACCOUNTANTS

CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

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Architects

WASHINGTON, D. C.

Wm. J. J. Chase, A. I. A.

Architect

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Architects and Engineers

1204 Wynne Claughton Bldg.,
ATLANTA, GA.**E. S. Draper**Landscape Architect and Engineer
Fellow American Society of
Landscape Architects1516 S. 4th St., CHARLOTTE, N. C.
101 Marietta Bldg., ATLANTA, GA.**Mees & Mees**

Engineers and Industrial Architects

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CHARLOTTE, NORTH CAROLINA**Leslie N. Boney**

Architect

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INCORPORATED

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231 So. La Salle St. CHICAGO
JACKSONVILLE — NEW ORLEANS**Airmap Corporation of America**Aerial Surveys and Maps
Consultants and EngineersThe AIRMAP—The Engineer's Aerial
Map for City Planning, Water
Supply Studies, Zoning,
Complete Aerial Tax Map Service
42 Flatbush Extension BROOKLYN, N. Y.**Ira G. Hedrick, Inc.**Mem.
A. S. C. E.

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Designs, Supervision, Estimates, Bridges
and Structural Work.
HOT SPRINGS NAT'L PARK, ARK.**Charlton & Davis**

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a Specialty
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Consulting Engineer

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City Bank Bldg. SHREVEPORT, LA.**J. E. Greiner & Company**

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Design, Construction, Investigation, Ad-
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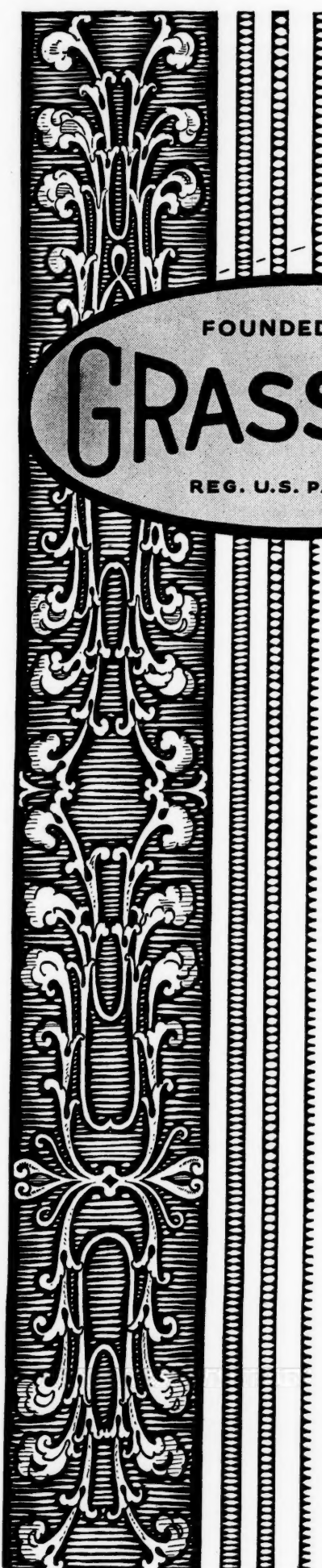
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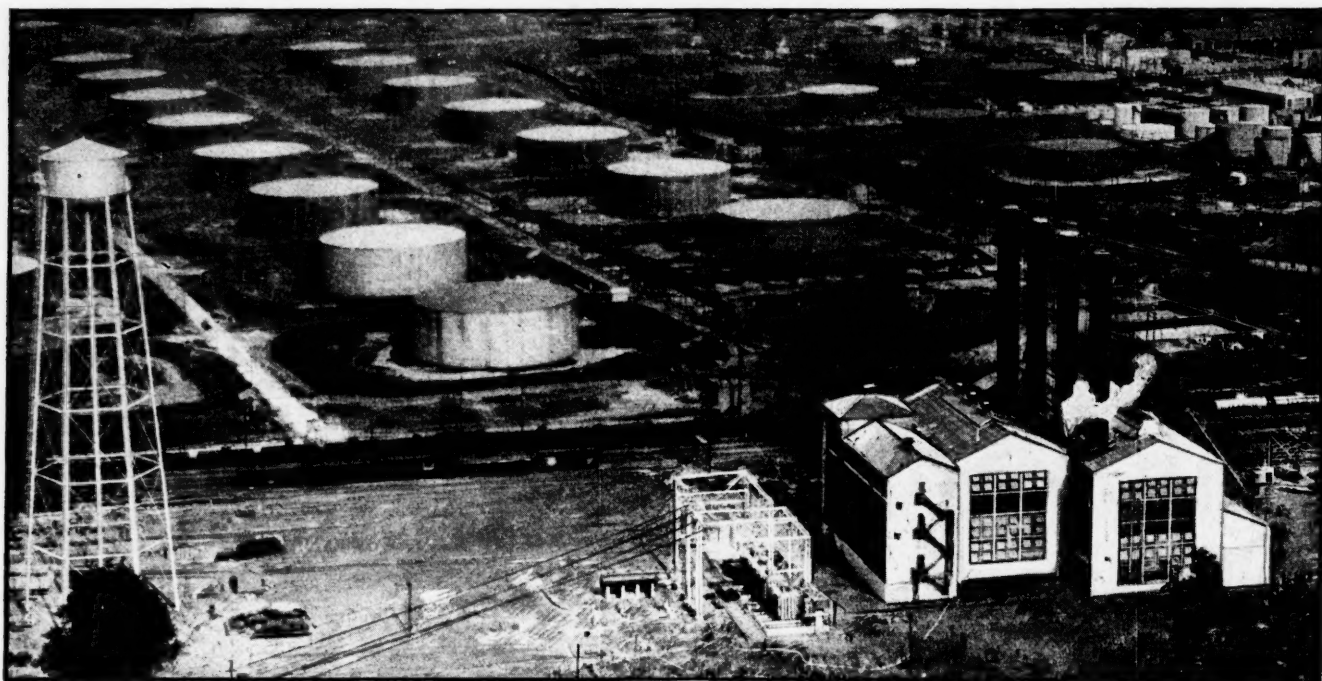
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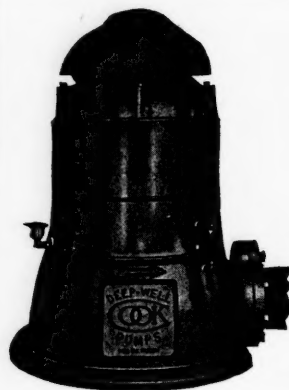
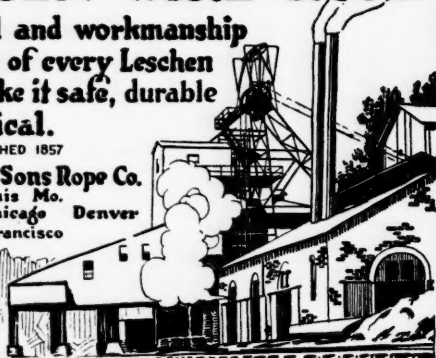
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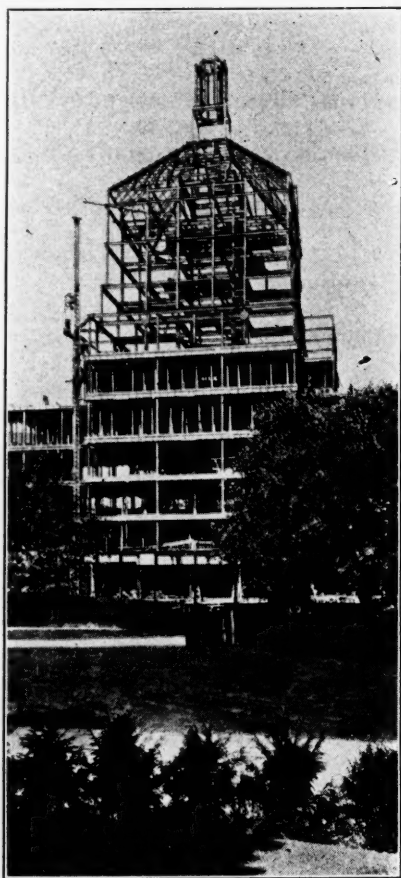
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Vol. XCVIII No. 21 }
Weekly }

BALTIMORE, NOVEMBER 20, 1930

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A Thanksgiving Thought

THE present and potential resources of the United States are great almost beyond man's power of comprehension. Significant is the fact that the achievements of America in the past have been of a constructive and productive character. American prosperity is based on production and on multiplication in production, the building of many industries in place of a few. And the Thanksgiving season is a fitting time for taking a national inventory, and for attempting to understand and appreciate something of the marvels and the blessings of this land.

For years, the MANUFACTURERS RECORD has presented weekly a résumé of the development of the South as potentially the most productive area in the Nation. This serial, continued for nearly 50 years, has been compactly summarized from time to time and although many of the figures on the South and on the Nation as a whole have been previously presented, the facts are well worthy of repetition.

In order to fully understand the magnitude of America's development it is well to bear in mind that the United States comprises less than six per cent of the world's land area, its population is about seven per cent of the estimated total population of the world. It is only 154 years old—an infant in the family of nations. Yet this prodigy among the nations of the earth is preeminent in the production of raw materials, in the fabrication of products, in productive equipment, and in transportation and communication facilities.

The American standard of living, with its multitude of home comforts and conveniences, its means for recreation and methods of entertainment, its opportunities for religious worship and training and for secular education cannot be measured in cold figures. This high standard exercises a stimulating influence throughout the world.

Preliminary census returns indicate that the output of the factories of the United States last year reached the stupendous total of \$68,453,000,000, by far the greatest amount of manufactured goods ever produced in any one year by any nation, even exceeding our former record by more than \$5,000,000,000. In spite of the depression of recent months, 1930 values will not fall far short of the total values of a few years ago which were then considered amazing in their magnitude.

American mines have been producing annually

about 35 per cent of the world's coal supply, around 48 per cent of the world's copper and 35 per cent of the world's lead. Forty-three per cent of the world's pig iron is produced in the United States.

Ingot steel production will approximate 40,000,000 tons and while below the record of 1929 is still a substantial amount.

Oil wells in the United States produced 67 per cent of the world's output in 1929, or 1,006,000,000 barrels out of 1,448,000,000 barrels. In addition, approximately 2,000,000,000 cubic feet of natural gas was produced in the United States last year. We are just beginning to utilize this great resource. More than 12,000 miles of natural gas transmission lines radiating from Southern gas fields were constructed or projected this year.

The United States uses most of the crude rubber produced throughout the world.

More than 35 per cent of the total developed water power of the world is in the United States.

The world registration of automobiles and motor trucks last year was 34,876,000. Of that number 26,501,000, or 76 per cent, were in the United States. Normal production of motor vehicles is 4,500,000 a year.

Road mileage of the United States as of 1929, not including city streets, was estimated at 3,574,000, or over 54 per cent of the world's highways.

Two hundred and fifty thousand miles of railroad in the United States form 32 per cent of the world's total.

Of 122,336,000 miles of telegraph and telephone wire in all the world in 1929, 71,390,000 miles, or 58 per cent, were in the United States.

Building construction in the United States for 1930 will approximate \$8,500,000,000 and the value of existing structures in 1929 is computed at \$142,000,000,000.

In 1928 the National Industrial Conference Board estimated the aggregate wealth of the United States at \$346,399,000,000. Our national income has been estimated at between \$80,000,000,000 and \$90,000,000,000 a year.

And in all this program of national progress the South plays a prominent part. Pending the Government compilation of figures, gathered in the 1930 census, the wealth of the South is estimated at more

than \$77,000,000,000, which is 22 per cent of the entire national wealth in 1928.

The value of the South's manufactures is over \$10,500,000,000 and its agricultural products represent in value more than one-third of the country's total.

The South produces more than half the world's cotton supply. With more than 57 per cent of the country's active cotton spindles, the South produces 67 per cent of the domestic cotton goods output and consumes 72 per cent of the cotton used in American mills.

The South produces 45 per cent of the country's lumber. It is developing a great woodworking industry. It is creating other new industries based on cellulose products and by-products.

The South produces 44 per cent of the country's coal; 60 per cent of its petroleum; practically all of its natural gas, sulphur, phosphate rock, aluminum-bearing ore, fuller's earth; nearly one-half of its clay, feldspar, lead and zinc ore, mica, fluorspar and graphite. In fact, nearly one-third of the mineral output of the Nation comes from the South.

That the South is continuing its expansion program is proved by the fact that building and other construction contracts awarded in the South last year totalled nearly \$780,000,000, not including thousands of residences, private garages, building repairs, additions, etc., involving less than \$10,000 each. To the end of October this year construction contracts awarded in the South were setting a new high record, the total for the ten months amounting to \$814,000,000.

As of 1929, there were 193,000 miles of surfaced state highways in the country. The South had 73,000 or 38 per cent of these.

The 7,000,000 registered motor vehicles in the South are more than 26 per cent of the national total.

Railroad main line trackage in the South, 90,514 miles, was 36 per cent of the country's total in 1929, and the South is leading the country in the construction of new railroad lines.

Such are a few of the material items which are indicative of the great proportionate contribution by the South to the total national prosperity.

No nation in the world has more abundant reason for Thanksgiving than the United States. No area in the United States has greater cause for gratitude than the South.

More Cotton on Less Acreage

THE fact that cotton growers in Colquitt county, Georgia, this year produced 26,000 bales from 40,000 acres, in comparison with 24,000 bales on 100,000 acres in 1925, was disclosed by County Agent R. A. Stratford at a gathering of bankers who recently visited Moultrie. From another viewpoint, the growers now are producing 325 pounds per acre as against 120 pounds in 1925. Thus, in five years'

time the output per acre has been more than doubled.

Mr. Stratford added that the previous cost per pound was about 12½ cents, and the lower acreage has brought it down to about 8½ cents, a reduction of 32 per cent. J. B. Sims of Doerun, Ga., showed 10 bales produced on five acres and said he had produced 19 bales on 10 acres as "a stunt."

Indications of prosperity at Moultrie were shown in the fact that there is not a vacant house in the city and not an idle farm in the county.

What the farmers of Colquitt county have done in producing more cotton on fewer acres at less cost can be followed to advantage by other cotton growers of the South. Improved quality and more cotton per acre should be dinned into the consciousness of the Southern cotton farmer and the bankers and merchants who supply his credit needs.

Price-Cutting Injurious to Industry

CONTINUATION for another decade of price-cutting tactics in American business will wreck many industrial enterprises if one may accept the assertion made by Representative M. Clyde Kelly of Pennsylvania to the National Association of Retail Druggists. Also, Mr. Kelly added, the practice will virtually eliminate the independent retailer from industry.

In the producing branch of industry the magnitude of this practice and the evils resultant have long been recognized. Sales without adequate profit and often at no profit have long been deplored by industries in their annual conventions. There has been much discussion of the subject, but little action has been taken by individual manufacturers who have the remedy in their own hands.

No time could be more opportune than the present for elimination of price-cutting, particularly by manufacturers. Assurance of an adequate profit on sales should prove a great stone in the foundation on which a sound revival of business must be established. Naturally, many details are involved in the fixing of prices, but these will be found susceptible to adjustment as soon as competing producers abandon cut-throat selling methods.

Since the foregoing was written, announcement has been made that the Carnegie Steel Company of Pittsburgh, in an effort to stabilize prices, has set a minimum price of \$1.60 per hundred pounds on bars, shapes and plates for the Pittsburgh district. This action follows the advice given by James A. Farrell, president of the United States Steel Corporation, before the recent meeting of the American Iron and Steel Institute. It is believed that such a course will help to relieve the uncertainty in the steel price structure which has caused consumers to be hesitant in placing orders.

It is expected that other large makers of bars, shapes and plates will follow the lead of the Carnegie Steel Company. Industries in other lines should take some such step toward stabilization.

A Sound Investment

THE tremendous importance of businesslike advertising as a factor in business revival and unemployment relief is emphasized by the experience of the National Lumber Manufacturers Association, Washington, D. C., in its efforts to stimulate building construction. Low prices for materials and labor now prevailing and the advantages of building, modernizing and repairing at this time have been the basis for this campaign.

Much in line with reminders by the MANUFACTURERS RECORD, this advertising movement has impressed on the people generally and on dealers in materials and on contractors, the fact that to build now is likely to prove a remunerative investment. The eagerness of the building industry for business has caused dealers and contractors to organize local bureaus, to provide free technical advice and assistance to home owners on construction and remodeling plans. As one result, some bureaus inspired enough home-improvement jobs to make the cost of maintaining them and continuing the advertising campaign only about 5 per cent of the volume of business they created.

The success which so far has attended this building movement is encouraging. As people grasp the fact that the present is preeminently a building period, they draw on hoarded money for that purpose and put it into circulation, or borrow at favorable interest rates and invest.

This construction opportunity is indeed an opportunity in the South right now. In great areas such work may be started and continued through the winter, with materials and labor available at attractive prices. The South becomes the great winter construction market, with sufficient supply of materials and labor to preclude the price advances that usually accompany increase in demand.

For those who prefer houses of wood, the South offers lumber in abundance. It produces about 45 per cent of the country's total output. Almost every kind of appropriate wood is available, and in these days even the least durable can be fortified by paints and preservatives to protect it against decay.

In the South there has been developed a building and insulating material industry utilizing waste fibrous products and thus contributing to the nation's building material supply.

Brick for building construction is produced in abundance in the South, which with 1,600,000,000 brick a year provides 25 per cent of the domestic supply of the entire nation.

In the 30,500,000 short tons of stone, 4,800,000 tons of granite and 360,000 tons of marble produced in the South, residence builders have a widely varied and abundant supply of such materials for their needs.

The demand for Portland cement and concrete is met by production of 40,000,000 barrels of the former and \$15,000,000 of concrete products in the South each year, in plants scattered throughout every Southern state from Maryland to Texas.

Emphasis laid by the American Institute of Steel

Construction at its Pinehurst convention on advantages of steel for residence construction brings steel prominently into the picture. According to the Institute some excellent pioneering work has been done and several hundred residences have been built during the past year or so with steel framing. The South is prepared to meet steel demands for every purpose, including residence building. Approximately \$300,000,000 of steel works and rolling mill products are turned out by Southern plants each year, their strategic location permitting convenient transport to points where material is needed.

Residence contracts involving \$10,000 each and over totaled \$64,350,000 in the South in 1929, and contracts below the \$10,000 mark undoubtedly formed a great aggregate. The normal incentives for home building in the South are now strengthened by low prices for materials of every kind, plentiful and easy money and an abundance of labor.

The success of the Lumber Association's recent movement is merely the latest proof that businesslike advertising is the outstanding method for keeping people informed and inspiring them to build and to buy.

Natural Gas in American Industrial History

ANOTHER "infant industry" is attaining giant stature. Introduction of the natural gas industry into the circle of great American enterprises is characteristic of the magnitude and the constructive nature of American development. In this development the South is taking a major part.

Although attempts were made half a century ago to place natural gas distribution on a commercial basis, meagerness of the supply and crudities of transmission facilities rendered such efforts abortive. Today the supply is more than sufficient to meet demand, even though new fields of consumption have been opened up through improved methods of pipe construction and the laying of long-distance pipelines. Already, 80,000 miles of pipeline are in actual and prospective operation, and producers are seeking customers even in areas far from the present fields.

In the approximate half-century of its life, the MANUFACTURERS RECORD has seen many industries develop from small beginnings into enterprises of national and international magnitude. Now, natural gas must be added to this ever-expanding list of great enterprises that have played and are playing so prominent a part in our economic growth.

Elsewhere in this issue Alexander Forward, managing director of the American Gas Association, discusses various phases of the development of the gas industry.

Without work, no amount of talent, no amount of influence will carry a man very far in this world.—Cardinal Gibbons.

Brighter Colors in Business Picture

TOUCHES of cheerful color are added to the general business picture in reports to the MANUFACTURERS RECORD on industry and trade in various Southern States and throughout the country.

Indicative of the confidence of industry in the underlying soundness of the situation, for instance, is an announcement by George T. Ladd, president of the United Engineering & Foundry Company, that large steel companies are preparing to expend from \$75,000,000 to \$100,000,000 in new mill equipment within the next few months. Advantage is to be taken of the opportunity to purchase and install up-to-date machinery and appliances, and thus to modernize the plants and to permit appreciable reduction of production costs. This money will circulate through a network of industrial and construction channels and will exercise additional weight through the stimulation of many activities.

Another phase of this confidence appears in the decision of many concerns, such as the Procter & Gamble Company, to keep their regular forces at work. Also, from various sources come reports of the re-employment of workers who had been laid off, such working groups ranging from a score or a hundred in some instances to from 1000 to 3000, as in Detroit. Railroad shops in the South report work for many old hands and, taken by and large, employment conditions may be said to be improving.

In addition to reported increases in dealers' orders for automobiles, confidence is expressed by Harvey S. Firestone that the tire industry will enjoy "the largest business in its history" in 1931. Not only is the slack to be taken up between sales of 79,000,000 tires in 1929 and 55,000,000 this year, but also the industry will profit proportionately as business in general may improve.

Besides its building projects already under way, the du Pont Company has arranged to crowd into six months the work on plant repairs, renewals and replacements which ordinarily would be carried over a much longer period, and employment at 70 scattered points thus is to be provided for many men.

"Sound reasons for encouragement in the South" were recently proclaimed by President A. E. Clift of the Central of Georgia Railroad, and other Southern executives in various enterprises view the future through the same glasses. While census figures for the country show 2 per cent unemployment, says Mr. Clift, in the South it is only 1 per cent. Official estimate that the farmers of Georgia will receive \$200,000,000 in cash for their crops leads to computation of the South's farm income as around \$1,-

000,000,000 at the least. The number of active cotton spindles in the South has measured up fully this year to last season's figures and ranges 1½ per cent higher than in 1928, whereas for the country at large there is a present shrinkage of 3 per cent from 1929 and 7 per cent from the year preceding. The development of natural gas in the South further stimulates a movement of established industries from other sections and the creation of new ones in this area, while the sound position of present Southern industries will enable them rapidly to increase their pace as demand develops.

General survey of the situation in Alabama by the Birmingham News shows power consumption to be on the upgrade, railroads to be facing the future with courage and hope, chemicals at least to be holding their own and Southern banks ready and eager to lend financial aid where it may be needed in constructive and productive effort.

In corroborative detail, President Thomas W. Martin of the Alabama Power Company states that his system is distributing the same amount of power as a year ago, and that October showed an increase of 10 per cent over September.

"A rather decided improvement" in the textile business is set forth by Benjamin Russell, president of the Russell Manufacturing Company, Alexander City, who shares a widespread belief that the need for replenishing supplies will promote a substantial demand.

Prospective highway work is only one of several factors which J. Wallace Johnston, vice-president of the Lone Star Cement Company, feels will help to invigorate the cement industry.

Inquiries for new business assume important significance in the mind of William D. Tynes, president of the Hardie-Tynes Manufacturing Company, and in the view of others who have noted the appearance of this weighty economic factor.

R. I. Ingalls, president of the Ingalls Iron Works Company, Birmingham, reports that their Pittsburgh plant in particular is swamped with requests for estimates on structural steel, and there seems no doubt that Southern mills will share in this business.

Theodore Swann, president of the Swann Corporation, believes that orders on hand indicate that the last quarter of this year will show better business than any other quarter; H. J. Cullen, president of the Southern Kraft Company, looks forward with optimism, and D. P. Bestor, Jr., president of the First Na-

tional Bank of Mobile, thinks that business conditions are "slowly and certainly forging ahead."

Jacksonville notes Florida's business improvement in October over preceding months. Bank clearings in Jacksonville rose from \$44,280,000 in September to \$48,600,000 in October, and postal receipts from \$72,800,000 to \$82,200,000. Building construction permits in October amounted to \$207,000, making a total of approximately \$2,500,000 for 10 months, with expenditures of \$60,000 for repairing and modernizing private properties. "Jacksonville is advancing industrially and shows steady growth in permanent population," says the Florida Times-Union, and this advance is understood to be under way in relative measure in other places in the state.

From Tampa, it is reported that 24,000 barrels of cement were shipped in October to ports in the Caribbean Sea, phosphate exports amounted to 89,400 tons and more than 6,500,000 feet of pine went out. Imports in October also were above normal. The citrus and other fruit and vegetable industries of Florida are in good shape, and the canning and freezing of citrus fruits has become a substantial feature of industrial growth. The usual number of visitors from other states is expected during the coming winter season. From December to March last year more than 45,000 railroad passenger tickets were sold from New York and Philadelphia to Florida points.

Opening of the great lumber mill operated by the Enterprise Manufacturing Company at Waycross, Ga., is thought by the Albany Herald to be in line with opinion that times are improving steadily in Georgia and throughout the country. Sentiment in Atlanta, Savannah and other cities is optimistic and the state expects to recuperate from business and agricultural depression and move forward at a reasonable rate.

Improved conditions in Kentucky are reported from Louisville, where, for instance, the Standard Sanitary Manufacturing Company has geared up from 40 per cent capacity to 60 per cent, and the Mengel Body Company recently has given work to 140 additional men. Sales by the Mengel company for October are expected by President C. C. Mengel to bring business for the last quarter of this year to more than \$1,500,000 ahead of the preceding quarter. Reopening of the Ford plant at Louisville has given work to 650 men.

The "outstanding feature of the textile industry" is found by the Depart-

ment of Commerce, as of November 13, to be "the rapid progress" under way toward attaining a balance between production and consumption. Particularly impressive is the fact that sales by a majority of the cotton goods manufacturers last month represented 147 per cent of production, and actual shipments averaged 118 per cent of that group's output. Stocks held by these manufacturers have decreased 47,000,000 yards, or 10.6 per cent, thus putting the manufacturers in a better position, as the lightening of the weight of stocks relieves pressure on prices.

Return to full daytime operation by four of the largest textile mill groups in the Piedmont section is considered indicative of better times in South Carolina. The Woodside, Easley, Brandon and Victor-Monaghan chains have gone into 55-hours-a-week operation, as has the F. W. Poe Manufacturing Company, of Greenville, virtually all having been on a 40-hour basis. John H. Cope, president of the Santee cotton mill at Orangeburg, reports an increase in orders; the Anderson Plywood Corporation is operating on a full 24-hour day, and W. L. Glover, vice-president of the Edisto National Bank, says that collections for the year have been most satisfactory. The Dwight Manufacturing Company, a New England concern, is spending \$600,000 for improvements at its large plant at Alabama City, Ala.

Another indicator showing the direction of the industrial trend is the recent sale of 50,000 tons of Alabama pig iron by the Woodward Iron Company, Birmingham, to the American Radiator & Standard Sanitary Corporation. The purchasing company will use the iron in its plants at Birmingham and Louisville and at Bayonne, N. J., and Litchfield, Ohio.

Plans for employing from 2500 to 3000 new workers in its operations in five states are announced from Huntington, W. Va., by the W. M. Ritter Lumber Company, with plants in Virginia, Kentucky, Tennessee, South Carolina and West Virginia, starting on three days a week.

The intention of the Missouri-Kansas-Texas Railroad to continue its improvement program on a scale commensurate with that of 1929, when improvements exceeded \$6,000,000, is announced by President Michael H. Cahill.

Immediate distribution of \$400,000 worth of tractors and tractor equipment to farmers in Texas is described by the Dallas News as significant proof of speedy recovery on the part of the Texas farmer and of the stability of credit agencies which serve him. And other industries in Texas are expected to keep step with agriculture.

Shipyards of the United States, of

which a score are situated in Southern ports, are engaged in the building of \$140,000,000 of combination passenger-cargo ships and Homer L. Ferguson, president of the Newport News Shipbuilding & Drydock Company, urges legislative provision for the construction of many strictly cargo vessels.

As an instance of new activities in the Federal Government, the War Department recently has arranged for \$2,000,000 additional expenditure for immediate work, of which \$700,000 will go to the aviation field at Quantico, Va., and \$600,000 for barracks at Hampton Roads.

The South may be said to be leading the country in industrial and business achievement, and in confidence and optimism.

\$750,000 Expenditure on Snell Isle Properties

St. Petersburg, Fla.—The Snell Isle properties here consisting of 1400 acres of land, including three 18-hole golf courses and an unfinished club building, have been purchased by the Tocobayga Holding Company, a new corporation, which plans to expend at this time about \$750,000 for the completion and enlargement of facilities. Plans for improvements and additions to the Golf Club House and Beach Club are being prepared by Kiehnel & Elliott, Miami, Fla. General contract has been awarded to E. B. Ring, St. Petersburg, for the following work: Completion of bridge across Coffee Pot Bayou to cost \$50,000; completion of Golf Club House and addition of kitchen and dining room, professional's quarters, caddy room, swimming pool 80 by 40 feet, glass roof over dance floor, etc., \$47,000; concrete bridge across canal between units 1 and 2, \$5,000; New Beach Club building with swimming pool, sifted sand beach and 53 cabanas, \$100,000; polo fields, stables and quarters for help, \$300,000; hydraulic dredging, 1,385,000 cubic yards; 15,000 lineal feet of seawall; 124,765 square yards of street paving; 37,600 lineal feet of water mains, and 35,000 lineal feet of gas mains.

Lime Industry Conditions

Total shipments or deliveries of lime in 1929 are computed by the Department of Commerce at \$29,639,880, a decrease of 18.2 per cent from 1927, the previous census year. The total for 1929 was made up as follows: Quicklime, 1,940,123 tons, \$15,899,410; hydrated, 1,399,085 tons, \$11,267,952; agricultural, 748,872 tons, \$2,472,518. The number of establishments in 1929 was 239, with 9,747 wage earners and \$10,791,000 in wages.

Rivers and Harbors Congress

In an announcement on the twenty-sixth convention of the National Rivers and Harbors Congress to be held in Washington on December 9 and 10, officials of that organization indicate that the meeting will strongly endorse a big increase in the average annual appropriation for rivers and harbors, both to help in solving the unemployment problem and to insure the progress of waterways work.

The Rivers and Harbors Bill passed last summer adopted 175 new or modifications of existing projects and authorized an expenditure of \$146,000,000 at once and of \$350,000,000 to \$400,000,000 ultimately. It is expected, however, according to a statement made by the Congress regarding this bill, that unless increase in authorizations shall be matched by an equal increase in appropriations, work on all projects, old and new, must be slowed up. Actual expenditures during the past fiscal year were nearly \$64,500,000, of which not quite \$44,000,000 was for new work and the remainder for maintenance. Increase in the appropriation to \$100,000,000 would almost double the amount available for new construction, and it is in this direction that the organization is working.

Among the subjects and speakers included in the preliminary announcement covering the convention program are: Waterways and the War Department, Hon. Patrick J. Hurley, Secretary of War; National Aspect of River and Harbor Improvements, Major General Lytle Brown, Chief of Engineers; The Transportation Situation, Samuel O. Dunn, Editor, Railway Age, Chicago; Waterways and Railways, Hon. Smith W. Brookhart, U. S. Senator from Iowa; Unification of Waters of the United States, S. Wallace Dempsey, Chairman, Committee on Rivers and Harbors; An American Merchant Marine, T. B. O'Connor, Chairman, U. S. Shipping Board; The Atlantic Intracoastal Waterway, Its Meaning and Progress, J. Hampton Moore, Philadelphia; Marinas, Their Growth and Operation, Capt. R. R. Blythe, New York; The Beaver, Mahoning and Shenango rivers, Hon. John G. Cooper, Youngstown, Ohio; Standardization, Theodore Brent, Pres., Redwood Steam Ship Line, New Orleans; Waterways of Czechoslovakia, Prof. Ing. Antonin, Smrcek, Brno., Czechoslovakia, and the President's Annual Address, Hon. Riley J. Wilson, Ruston, La.

America's Greatest Port, Our Inland Seas, Boston Harbor and the Cape Cod Canal, Recent Waterway Developments in Texas, and the Pacific Coast Rivers and Harbors are subjects for which the speakers are yet to be announced. Toastmaster for the banquet will be Hon. Joseph E. Ransdell, U. S. Senator from Louisiana.

Consider the Railroad

Unregulated Competition, Aided and Subsidized by Government, Making Serious Inroads on Rail Carriers' Revenues

Mr. Clift, in the following article, as reprinted in part from the Central of Georgia Magazine for November, presents the railroads' case against the growing competition of bus and truck lines. While the appeal is made particularly to railroad workers, emphasizing that the situation demands activity on their part, inasmuch as their livelihood and earning power is threatened, Mr. Clift presents facts which are worthy of serious consideration by the public at large.—Editor MANUFACTURERS RECORD.

By

A. E. CLIFT,

President, Central of Georgia Railway Co.,
Savannah, Ga.

IT is common knowledge that passenger traffic on the railroads is decreasing. In 1929 the demand for passenger service was less than in any year since 1909; that is to say, it was back at the level of 20 years ago, and will show a further sharp reduction in 1930. It is also well understood that this decrease is due to increasing use of the bus and privately owned automobile by the traveling public.

Frequently a newspaper, an organization or an individual will ask why railway management does not do something about this, or take steps to combat such competition. The answer is that railway management has been aggressive in its endeavors to hold and increase travel by train. During the period of declining travel it has shortened schedules, improved equipment, added trains, invented conveniences, comforts and safety devices for the accommodation and protection of the public. One need only think of the modern steel vestibuled coaches with steam heat, electric light, electric fans, screened windows, etc., to realize the tremendous advance over the accommodations offered 20 years ago. Pullman equipment offers an equally favorable comparison, through the observation and lounge car, the individual bedroom car, and the like. The railway record for safety of passengers grows more impressive year by year.

Occasionally the suggestion is made that fares be reduced. This too has been tried. The general average of receipts per passenger mile is decreasing annually because of excursions, special rates, etc. Experiments with reduced fares for lengthy periods where there is direct bus competition have been made, and these have failed to stimulate travel to any appreci-

able extent. The experience of the railroads has been that lower fares will not bring back passenger traffic.

Private Automobile Not Cheaper Than Train Travel

Studies conducted by certain railroads indicate that of the passenger traffic lost by the trains, 20 per cent goes to the bus and 80 per cent to the private automobile. If this estimate is correct, it apparently goes to show that the average person prefers to travel in his own car instead of by train, and that in this, as in other affairs, he is willing to

spend his money to obtain what he wants. Figures issued by the national organization of automobile manufacturers say that the average cost of operation for a light 4-cylinder car is 6.02c per mile, and for the heavier 6-cylinder car is 9.46c per mile. The average passenger fare is 2.8c per mile. These figures give the answer to the man who says it is cheaper for him to drive his car than to travel by train. Perhaps it is, if the car has as many as four passengers.

Another query frequently heard is "Why don't the railroads operate buses themselves?" The reply is that they do, but their experience for the most part has been that these bus lines are not profitable. The bus business is not yet stabilized and receipts on many railroad operated bus lines fail to equal depreciation, operating expenses and repairs.

Use Of Public Highways Gives Bus Lines Unfair Advantage

Another question: "Why can the bus make cheaper rates than the train?" As stated in the foregoing paragraph, prevailing rates of fare in many instances are insufficient to insure profitable operation. There are, however, certain important privileges enjoyed at public expense by the bus and truck, for which their competitor, the railroad, is taxed and must also pay. A railroad buys land for right of way, builds and maintains tracks, terminals and stations. The bus and truck use a highway built, maintained and renewed by the public treasury. The money for this purpose is raised by taxation, and a large part of it comes from the railroads, which are heavy taxpayers. A parallel case would be that of a merchant who builds a store, or pays



Day Coaches With Individual Movable Chairs Operated on Central of Georgia Train. There Is No Extra Charge for Seats in These Coaches



Views Aboard Central of Georgia Passenger Trains, Showing Comforts Offered Railroad Travelers

rent for one, while his competitor is given space in the court house, rent free, with lights, heat and janitor service thrown in for good measure.

Railroads are expected to supply dependable service 24 hours every day, through 12 months every year, regardless of weather conditions. In the event of highwater, floods, blizzards or other interruption to traffic, the railroads spare no labor, or expense, in restoring communication at the earliest possible moment. When a road or bridge is washed out, the bus or truck company feels no responsibility and waits upon

the expenditure of public money to restore means of communication.

Railroads Severely Regulated, Bus Lines Practically Unregulated

These are some of the inequalities that weigh heavily upon the railroads, and there are numerous others. It should be borne in mind that the railroads are not attempting to throttle or destroy automobile competition, they are merely asking that such competition be taxed and regulated on the same basis as they are—certainly a reasonable attitude

and one that cannot justly be criticised. As matters now stand, the railroads are regulated and supervised by 48 state legislatures, 48 public service commissions, the United States Congress, the Interstate Commerce Commission, and the national boards of mediation and arbitration—100 different agencies. Railway motive power and equipment are inspected by the Interstate Commerce Commission, and by the various state commissions, and must measure up to strict standards. No such inspection is made of buses and trucks. Competitors of the railroads are either entirely un-

regulated or subject to only nominal supervision, and in many instances are aided directly or indirectly by the government.

Barge lines are also competing for freight traffic, using waterways which are constructed and maintained by appropriations from the public treasury. The government operates one barge line which constantly incurs large deficits that are defrayed by the tax-payers. The government proposes to spend hundreds of millions of dollars in deepening other waterways at the expense of the taxpayers, the use of which will be given free to water-carriers, a policy of subsidized competition which is unfair both to the railroads and their employees.

What the Railroad Worker Can Do

The situation is of the gravest concern, not only to the management of railroads or the owners of railroad stocks and bonds, but to the employee and his family. The railroad man, no matter in what branch of the service, finds his future imperiled, his earnings reduced, or his very livelihood threatened by the situation. With shops closed or working on reduced time, with maintenance of way curtailed, trains being taken off, forces reduced, the menace to the railroad employee is as real as if war or disease were sweeping across the country, and the man who has any regard for the future will spare no effort to protect himself and his family. The sane and forward-looking man will not shrug his shoulders and comfort himself with the false hope that "business will improve next year." The railroads are suffering from ills quite apart from the prevailing business depression, ills that will not disappear when business picks up, and ills that will never get better merely by letting them alone.

The railroad man should individually and through his organizations ask for business, freight and passenger, and follow through to see that it is safely and expeditiously handled for his line, because every person has influence with at least five others, and these in turn with still others. The railroad man should take every opportunity to give the public the facts about the transportation situation. He should not feel in the least apologetic either in soliciting business or informing the people. What is good for the railroads is good for the people; prosperous railroads mean a prosperous people.

In their informative activities, railroad employees should make plain the manner in which the public welfare is bound up with the welfare of the railroads. People will be sympathetic but not deeply concerned with the troubles of the section man, the boiler-maker, or the engineer, but they will be genuinely

moved when they see that they will be adversely affected by unprosperous railroads.

No community wants to be without the dependable transportation service that the railroad alone can supply, yet since 1921, 14 short line railroads in the State of Georgia alone have been abandoned and sent to the junk heap, and there are more to follow. The railroads are large purchasers of fuel, material and supplies. Their curtailment of purchases has been felt in all branches of business. Their payrolls are disbursed in every community they serve. The reduction in their forces has cut down the sales of every store in every town where a laid-off employee lives.

Unprosperous railroads cannot render satisfactory service. Business men, who recall the annoyance and actual losses due to inefficient transportation service in the old days have no desire to repeat that experience, but nothing is more certain than that the present high standard of service will be impaired if railway revenues continue to decrease. The business man who patronizes competitive forms of transportation is voting for inefficient railway service in the near future.

Railroads Among Each Community's Largest Taxpayers

The railroads are large taxpayers. Their contributions to the treasury help support every governmental activity, schools included. When the time comes that the railroads can no longer pay such heavy taxes, the burden on the business man will be increased. The property-owner and income earner is now taxed to pay for highways that are daily being ground to pieces by heavy motor vehicles. When the time comes to rebuild these highways, the taxpayer, his children, and his children's children will feel the pinch. He may save a few dimes now, in transportation costs, that will cost him many dollars in taxes later on.

The roads that the taxpayers have built for their own use, or to bring people to and from communities where they live and do business, are crowded by vehicles operated for hire. Such vehicles often disregard the rights of others, they increase the liability of accidents and add to the hazards of the road, all without contributing equitably to the expense of construction, repair, upkeep or renewal. And all too often, these buses and trucks are operated by individuals of little or no financial responsibility, persons who, even if they had the inclination would lack the ability to make restitution for the injury they might do to life or property in traffic accidents.

Reference has been made to the part the railway employee can take in dealing with this situation. The general public can solve its transportation problem once the people are awake to it. Public sentiment can manifest itself in such a way that the representatives of the people in the various regulatory and legislative bodies will act. They can assert themselves in favor of an equitable policy of taxation and regulation, to be applied to all forms of transportation on a like basis. They can say that their tax money shall not go to subsidize certain forms of transportation and be withheld from others. They can, if they desire dependable railroad service, support it now, so that it may continue to be satisfactory and reliable. They can recognize that railroad service is an indispensable factor of America's business system, and accord it the patronage that it deserves as such.

Cotton Mills to Eliminate Certain Night Work

Announcement that cotton manufacturers representing 23,302,252 spindles, or 74 per cent of the entire industry, have approved in principle the elimination of night work in cotton mills for women and minors under 18 years of age, is made by George A. Sloan, president of the Cotton-Textile Institute, in reporting the progress which this movement is making. Of this number, mill executives representing 19,500,000 spindles have subscribed to a declaration of such policy for their respective mills, and additional endorsements are coming in.

"In view of the brief time this proposal has been before the industry, textile leaders are distinctly encouraged by the extent of support for it that has already developed," Mr. Sloan comments.

These voluntary endorsements follow action taken by the Institute looking to elimination of this form of night work for women and minors between 7 P. M. and 6 A. M., to begin on or before March 1, next.

Mining Congress Conferences

Means of stabilizing the mineral industry, changes in mineral taxation, developments in coal mine mechanization, advances in standardization of mine practice and equipment, and related questions of importance to mining will engage the American Mining Congress in a series of group conferences, December 4 to 6. These will be held at the Mayflower Hotel, Washington. Also, the annual meeting of the organization will be held for election of officers and directors.

America Must Decide the Soviet Issue

By
GEORGE GARNER

SETTLEMENT of the alternative between United States recognition of the Soviet government or abatement of American-Soviet trade cannot well be much longer deferred. Uncle Sam has evaded a decision for several years, but the day is at hand when the situation must be faced and an unequivocal position assumed.

Indications of the impending crisis are emphasized by two recent events: On the one hand, the organization of a Joint Conference on Unfair Russian Competition, headed by former Ambassador James W. Gerard; on the other, a demand for United States recognition of the Soviet, expressed on behalf of some great American industries by James D. Mooney, vice-president of General Motors.

Not only has Soviet Russia commenced to dump its reported pauper and forced-labor products into the United States in competition here with American-standard commodities and goods, but also it is flooding foreign countries with Soviet goods at destructive prices and is closing those foreign markets to the United States. The American standard of living is threatened, and the civilized standard in other countries, seeking to advance toward the American level, is in imminent danger of being dragged down to the level now prevailing in Soviet Russia.

The argument of certain American industrial leaders that their trade with the Soviet is beneficial to the United States is answered by Peter A. Bogdanov, who is chairman of the Amtorg Trading Corporation, in announcement that every penny of Soviet imports from the United States must be paid for by the people of the United States through American imports from the Soviet. "It must be reiterated," says Bogdanov, "that the policy of the Soviet government is to purchase only as much as it is able to pay for with exports."

For every million dollars of its purchases from the United States, the Soviet proposes to dump \$1,000,000, in value, of goods into the United States and, as Soviet goods are produced at negligible cost to that government, \$1,000,000 in value means a huge volume to make up the money total. United States exports to Soviet Russia in Europe, says the Department of Commerce, aggregated \$123,000,000 in the fiscal year ended June 30, 1930, and the Soviet openly plans to dump enough of its pauper-production into the United States to balance this account and millions more, and to do so in its five-year program.

Into the foreign countries which for years have been profitable markets for

American agricultural and manufactured products, Soviet Russia is pouring floods of wheat and corn and other cereals, and huge amounts of meat and lumber and other commodities, the Soviet prices in many instances running as much as 30 per cent below those in the countries into which it is dumping its enforced-labor production. The American protective tariff becomes less and less effective against the flood of Soviet raw and finished materials. To say that a world economic crisis is threatened, is no exaggeration.

From personal observation and on personal information from the Amtorg, the writer feels free to assert that the Soviet has built up its great trade with the United States largely to compel American recognition of the Soviet government. From personal observation, he can state that some American industries have long had this recognition in view, for the protection of their business with the Soviet. "Russia is coddling up to American business—and especially 'big business'—to enlist its sympathy and aid in obtaining American recognition," he wrote in the MANUFACTURERS RECORD, May 6, 1926, and: "American business is not yet prepared—is not yet quite disposed—to come out openly and above-board for such recognition, but will continue quietly to do business with Russia until such volume be established as almost to force the American Government to recognize Russia, for the protection of American credits and other business engagements with the Russian government and other Russian creditors." American business now has spoken through Mr. Mooney.

The foundation for these statements was personally obtained at the convention of the National Foreign Trade Council, at Charleston, S. C., in April, 1926. Incidentally, the presence of Amtorg representatives was kept very quiet, although they talked freely with the writer in the seclusion of their rooms. At the following convention, 1927, in Detroit, the Amtorg representation was conspicuous and active.

Every piece of machinery, agricultural or manufacturing, purchased from America by the Soviet and to be paid for by the American people through imports from Russia is to be used in the five-year program for flooding the United States and America's foreign customers with Soviet goods produced at negligible cost and sold far under the production costs of other lands. This is no secret to the American industrial leaders

who have been assiduously cultivating the Soviet trade; it is a fact known to all informed men.

For the furtherance of its plan, the Soviet has engaged literally hundreds of foreign engineers and technicians, very largely from the United States, to contribute to upbuilding of Soviet industry under "technical assistance" contracts. Included among half a hundred American concerns which have furnished such technical men are several leading industrial corporations.

The Soviet five-year plan, started really on October 1, 1928, calls for the following results, among others: Increase of 133 per cent in industrial output; increase of 55 per cent in agriculture; investment of \$8,500,000,000 for industry and \$12,000,000,000 for agriculture. Imports for the five-year period are set at \$3,200,000,000, and exports at \$3,600,000,000.

In the production with which the Soviet proposes to flood the world merely in 1932-33 are included: Coal, 75,000,000 metric tons; oil, 21,700,000; iron, 19,000,000; pig iron, 10,000,000; grain from 65,000,000 acres of state and collective farms, and great quantities of lumber and other materials.

Such is a glimpse of the economic dangers which now threaten the civilized world from the Soviet dumping program. For the United States as the leading nation of the world, and with proportionate responsibility to all the world, formally and officially to recognize such an unfair and internationally destructive competitor should be considered unthinkable. The United States cannot be bribed by Soviet gold.

The alternative between recognition or abatement of this destructive American-Soviet trade cannot be much longer postponed.

Florida Citrus Transportation

An amendment to the Mediterranean fruit-fly quarantine regulations has been announced by the Secretary of Agriculture, under which the transportation of citrus and other fruits from the regulated area of Florida by trucks and other road vehicles is authorized under certain safeguards.

The amendment, now effective, limits the movement to fruits sent from certified packing houses in the regulated area and packed either in standard citrus crates securely closed with metal bands or in other standard commercial containers securely sealed. Each box and permit must carry proper identification.

"Natural Gas Business Most Spectacular"

By

ALEXANDER FORWARD,
Managing Director,
American Gas Association.

THE development of the natural gas business is most spectacular and appeals to the imagination. Yet, only a few years ago, some men were rash enough to predict a decline in the output of oil and natural gas which would restore the utilization of coal, stimulate the production of coke and other by-products and create for the gas industry new problems in costs of raw materials.

Transmission of natural gas was of slow development and the first cast iron gas line, two inches in diameter, extended from a well a distance of five miles to Titusville, Pa., in 1872. It is a far cry, indeed, from those days to the present status of nearly 80,000 miles of natural gas lines in the United States. Within recent years the large discoveries of gas in the Monroe-Richland parish field in Louisiana, in the Texas Panhandle, in and near Oklahoma City and in southern and middle California, together with fields in other sections of the United States, have greatly enlarged the available supply.

Natural gas is used in large quantities for industrial operations. Use of such a valuable natural fuel for some of these purposes, such as the manufacture of carbon black, may be seriously questioned and generations to come will have cause to regret that the nature of the development precluded more efficient utilization. However, California has a conservation law in operation; regulations in Louisiana and Oklahoma are becoming increasingly effective and are being sustained by the courts. Texas is at work on the problem. For the most part, producers are cooperating wholeheartedly in statutory, regulative and self-imposed restrictions; also, storage of natural gas in underground reservoirs is regarded as a very important measure of conservation. This permits withdrawal of gas from regions where competitive drilling exists and its transportation to places where it may be stored in underground fields and retained for future use. There are also technical methods for further conservation which are being carefully studied.

Transmission lines beyond 300 miles in length were only a few years ago deemed impractical, yet today a line is under construction from the Texas Panhandle to Chicago, a distance of nearly 1000 miles. There is talk of conveying gas to other cities in the Great Lakes area. Lines have been built and are in operation to Kansas City and Denver.

Excerpts from address before National Association of Railroad and Utilities Commissioners, at Charleston, S. C.

Natural gas is now conveyed from the districts in the San Joaquin Valley to San Francisco, and construction already planned and under way make it practically certain that all California, under adequate conservation, will be served for years to come with natural gas. In large areas of the country, manufactured gas has been displaced, and in other areas it is expected to supplement manufactured gas.

This displacement has already taken place in Texas, for with the introduction of natural gas at El Paso every community in Texas is now served with this fuel for all heating purposes. It is said that in some large Texas cities it is impossible to buy a pound of coal; there is no market for that commodity. Also, there is no smoke there, with its bad effects on health and its economic damage.

This fuel is now being transported from the Monroe-Richland parish field in Louisiana to cities of Alabama and Georgia, as well as to St. Louis and intermediate points, including Memphis, and it is about to reach its first city in Florida, Pensacola. Lines from the West Virginia-Kentucky field will carry natural gas to the Atlantic seaboard cities of Virginia and to the national capital, Washington. It seems likely that the eastern and southwestern producing fields may be united by tie-ins.

No one can tell what the near future may bring forth in the further extension of natural gas in public utility service. It is certain that networks of pipelines already extend over considerable portions of the North American Continent, and that there will be large extensions of this network within the next year or two. At some more or less remote day when the natural gas supply approaches depletion and becomes consequently too expensive for competition with other fuel, some of these pipelines may be used for long distance transmission of manufactured gas.

The average annual increase in natural gas sales for the past 10 years has been 10 per cent, but this rate of growth was greatly accelerated toward the end of the 10-year period. In 1929, a total of 1,917,693,000,000 cubic feet of natural gas was produced and marketed, which represented a gain of 22 per cent over 1928, as compared with an increase of 8 per cent for 1928 over 1927. In 1929,

there was an increase of 772,000 domestic consumers of natural gas. However, only 19 per cent of the total production was used in 1929 for domestic purposes, while the other 81 per cent is divided among various fields of utilization—45 per cent of the 81 per cent as fuel for boilers and engines in oil and gas field operations and for operating natural gasoline plants; 17 per cent in the manufacture of carbon black; 7 per cent to generate electricity in public utility power plants; 7 per cent at petroleum refineries, and 24 per cent in general industrial purposes.

Texas last year became for the first time the leading natural gas producing state, Oklahoma taking second place and California third. The total number of domestic consumers at the beginning of this year was 5,116,000, which means that no fewer than 20,000,000 of our population are being served with this fuel.

It is difficult to overestimate the importance of this development. It may very possibly be the most significant that has arisen in the public utility business, notwithstanding the marvelous developments due to electrical generation and distribution. It may even turn out that the natural gas business in its industrial and economic aspects will take its place in industrial history as the most significant and important development of the Twentieth Century.

Inevitably, such a gigantic and far-reaching development brings with it new problems.

First, as to rate making, it must be recognized that production, transmission and distribution entail tremendous costs in acquiring and developing natural gas and oil producing fields. Large sums must continually be invested in purchase and maintenance of adequate reserves for the future protection of customers. The expenses of drilling and exploration entail great risks. Hundreds of millions of dollars are invested in modern transportation systems to make the product available, and one pipeline now under construction, it is said, will cost \$125,000,000 to \$130,000,000. These investments must earn a return adequate to compensate the investors in the industry.

Manifestly, it is the duty of the gas company fully to inform regulatory bodies about its business, and it stands to reason that when this is done the regulatory authority will see to it that the utility is permitted to charge such rates as will earn revenue to maintain and insure complete and satisfactory service

to the public and to attract new capital for necessary extensions.

The transmission of natural gas by pipeline over long distances constitutes in many instances an interstate movement, but any burden which may be cast on the state commissions in respect to the charge of the wholesale transporting company for its delivered gas to the distributing company is a minor matter, so far as the public interest of the consumers is concerned, compared with the public disadvantages which must in my

opinion result from the establishment by the Federal Government of price control of this commodity on the ground that it is moving in interstate commerce. The business of producing gas is a different business from that of the railroad or telephone utilities. This doubtless will be admitted generally.

The natural gas companies, generally speaking, have a far-sighted and enlightened view of the situation. Here and there are some who wish to over-extend natural gas production and transporta-

tion, and to bring about a situation involving large competitive investments, duplicative and therefore wasteful in character, involving eventual heavy losses to the investors. But stabilizing influences within the industry itself are at work, and encourage the belief that the natural gas industry has the brains and the foresight to govern its expansion program so that state regulation will effectively protect the public interest. This is a gratifying and inspiring prospect.

Flexible Pipe Meets a Twofold Need

By A. J. HILDENBRAND, Purchasing Agent, Cincinnati Milling Machine Company,
Cincinnati, Ohio.

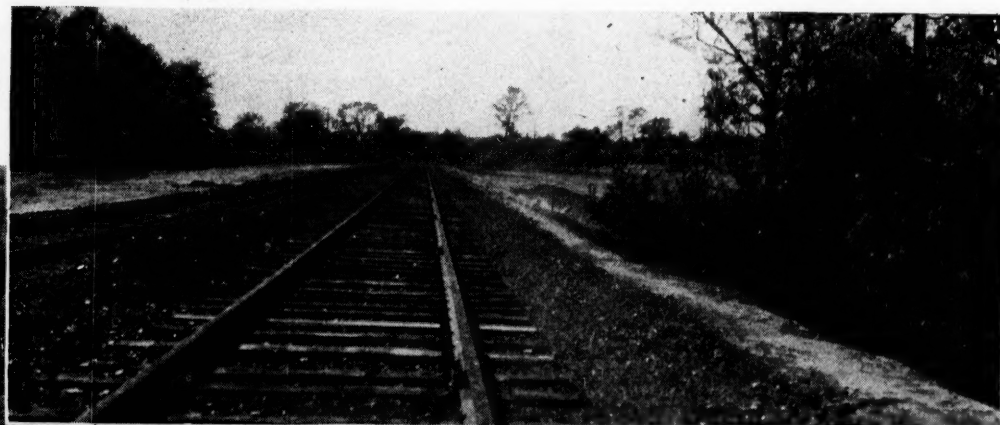
Serving a double purpose, the 200 feet of 48-inch Armco corrugated pipe purchased by the Cincinnati Milling Machine Company and installed in the fall of 1928, is proving a dependable stream enclosure as well as providing for industrial expansion. Confronted several years ago with the dual problem of waste disposal and the need of additional space for expansion, the Cincinnati Company saw a possible means of solution in a deep ravine near its plant, if satisfactory means for enclosing a small stream which ran through the ravine could be devised. Since the fill would have to be made intermittently, as material became available, the enclosure would be submitted to action of frost, impact of dumped material, and

the strain of unequal fillings. A flexible construction was deemed necessary to meet these varied requirements, and because of the depth and nature of the proposed fill, which would make replacement costly and difficult, strength and durability were also factors of importance.

A careful study of conditions indicated that an Armco corrugated iron pipe would most fully meet the needs of this particular situation. Accordingly, 200 feet of 48-inch pipe was ordered for the stream enclosure and 40 feet of 20-inch pipe for a lateral to carry industrial waste through the fill into the larger pipe. The 48-inch pipe was laid in the ravine, with little trenching necessary, and the lateral attached by means of a standard welded tee. Filling was

expedited by erecting a trestle from which waste materials, such as foundry sand and the like, could be dumped. The top of the fill, approximately 100 feet from edge to edge, was completed with earth excavated to the far side of the ravine. Excavation of this material cleared a space for further railroad sidings as well as for plant expansion. Two sets of track are laid over the fill at present, extending from the company's sidings on North Street to Pleasant Ridge. With the type of pipe used, a product of the American Rolling Mill Co., Middletown, Ohio, extension can be made at either end by simply banding on extra sections of corrugated pipe, so that industrial expansion for a period of years to come may be taken care of by this method of reclaiming the ravine.

The trestle, and below it the 48-inch pipe enclosing the stream, also the 20-inch lateral attached to it.



Above are the two sets of track which were laid over the fill. The method adopted for reclaiming the ravine provides space for industrial expansion for some years to come.

Pine Bluff an Important Woodworking Center

Second City in Country in Manufacture of Oak Flooring

Fifteen large lumber mills and yards in Pine Bluff, Ark., direct attention to the city as a lumber manufacturing center. These mills, with an annual lumber consumption of 1,050,000,000 board feet, produce coffins and caskets, oak flooring and dowel pins, millwork, lumber, automobile body parts, dimension lumber, casks, skis, staves, cooperage of all kinds, interior trim, including built-in furniture and cabinet work.

The mills may be classified as to number and character as follows: Auto body parts, 1; cabinet work, 1; dimension lumber, 3; cooperage, 1; lumber, 7; coffins and caskets, 1; millwork, 2; oak flooring, 3. These classifications naturally duplicate various large concerns manufacturing several different products. The aggregate annual payroll, estimated from a survey made in 1929, is \$2,080,000, for an estimated total of 1,400 employees.

The lumber mills of Pine Bluff represent an enormous investment, manufacturing products which are shipped not only to every state in the Union, but also to an international market. Pine Bluff oak flooring is used in homes, offices and buildings all over the world; the Orient uses the persimmon stock in its textile spindles; coffins and caskets from Pine Bluff find their market all over the South; European wines are preserved in casks of Pine Bluff manufacture; every Nash automobile on the highways of the

world has a body built in Pine Bluff; skis for winter sports in America and Europe are fashioned from Pine Bluff dimension stock; millwork, interior trim, shingles and lumber from Pine Bluff are used nationally. Pine Bluff is considered the second city in the United States in the manufacture of oak flooring and

lumber, interior trim and millwork; the great plant of the Seaman-Dunning Corporation, producing automobile body parts for Nash, representing an investment of between \$300,000 and \$400,000, employing 1,000 men; the Pine Bluff Coffin Company, manufacturing coffins and caskets; the Norton-Wheeler Lumber



Arkansas Division of the Long-Bell Lumber Company

holds important rank in wood-working.

Pine Bluff lumber mills and yards include the Arkansas division of the Long-Bell Lumber Company; the great Arkansas Oak Flooring Company mill; the Standard Lumber Company, producing

Company, producing barrel staves and dimension stock; the Peers & McGlone mill, which turns out rough kiln-dried dimension stock and auto body dimension stock; the Arkmo Lumber Company, which has a great chain of lumber and



Mill and Yards of the Arkansas Oak Flooring Company

millwork plants; the Hardwood Specialties Company, manufacturing ski stock and handles of all kinds, as well as many other woodworking specialties; the plant of the Reed Manufacturing Company, specializing in fine cabinet work; the Wheeler Lumber Company, producing lumber, and the great lumber and material yards of the McGehee Realty & Lumber Company, the Leslie Lumber Company, and the McSwine Lumber Co.

The newest Pine Bluff lumber mill will be that of the Southwest Manufacturing Company, which will at once establish a plant for the manufacture of hickory handle blanks.

Pine Bluff extends a cordial and standing invitation to the city as "an ideal industrial site," with great advantages in power, fuel, raw material, labor, transportation and factory sites.



Plant of the Standard Lumber Co., Producing Lumber, Interior Trim and Millwork

"Radicalism"

WHETHER the United States is ready to surrender its democratic form of government and substitute a communistic, autocratic government under the leadership of a radical class was a question recently discussed by George R. Hilty, of the Florida Power & Light Company, Miami, before the Acacia Club of that city. Speaking on "The Power of Radicalism in America," Mr. Hilty said:

"Radicalism is already enthroned in this country, so much so that the President of the United States recently warned the American people in no uncertain language of the impending great menace."

This sinister influence in American political, social and industrial life, Mr. Hilty cited, had been recognized by the American Legion in resolutions, condemning communism, and he continued:

"Here is a battle to be fought by every American citizen imbued with the true ideal of our American institutions, a battle more subtle, more difficult, and more far reaching than most of America's population realize. It is a battle of moral, spiritual, social, individual and political freedom against the encroachment of communistic autocracy."

"The socialistic and communistic forces of the United States are operating through five major interlocking organizations and many subdivisions for the sole purpose of undermining our present system of government and to wipe out our American Constitution and fashion a new one according to their own theory. These organizations and their subdivisions misinterpret through the newspaper, literature, lectures and other media our industry, business, and government activities, in a manner designed to shake confidence in our American industries, in our American juris-

prudence and our American ideals and institutions. Each year, they grow more extensive, bolder and more subtle, making it exceedingly difficult to segregate the wheat from the chaff.

"In these forces are organizations devised to fit almost every state of mind of almost every class of people. Through these organizations, their doctrines are being spread in our public and private schools, colleges, churches, Y. M. C. A's, secret societies, Chautauquas, chambers of commerce, labor unions, etc., in the United States. I am a firm believer in free speech, which is one thing, but an insidious doctrine of socialism, masquerading in the guise of reform strikes me as being quite another—a thing most difficult to combat.

"The Socialist Party stands for nationalization of our resources; public ownership of our industries; nationalization of our banking and currency system; recognition of the Russian Soviet government. Public owned industries should be administered jointly by the government and representatives of the workers. In other words, it stands for establishment in the United States of a Soviet form of Government.

"The League of Industrial Democracy is an off-shoot of the Socialistic party, organized in 1905, as the Inter-Collegiate Socialistic Society. In 1921, they changed the name to the League of Industrial Democracy, a more popular one. This branch in the guise of industrial democracy invades our seats of learning and cooperates with the college students in providing lectures, club life, student conferences and literature. Most of their efforts are made through campus and social club activities. I have here a list of 86 American colleges and universities in the United States and the names of the students who are the official representatives and heads of the Industrial Democracy college chapters in these colleges.

"The Public Ownership League was

founded in 1914 by Carl D. Thompson, who is its guiding spirit. It has an affiliated membership in the commercial, civic, municipal labor and other organizations throughout the United States. Thompson lays particular emphasis on the vast distribution of public ownership literature under franking privileges, and says that a careful canvass is to be made of the members of Congress, to supply them with all the essential facts and information relative to the possibilities of such a system as is proposed.

"The National Popular Government League was organized in 1913 with Senator George W. Norris as National Councillor of the People's Legislative League on the governing board. It may be termed the attacking league and prepares pamphlets, bulletins, etc.

"The Peoples Legislative Service says that recently its leading editorial made the first page of one of the biggest of the metropolitan dailies, and the New York World 'ushered our stuff right up to a front seat in its synagogue and let it talk to its big audience of several hundred thousand. It was a pleasant surprise when our own stuff jumped at us first thing when we opened the paper.'

"Radicalism is waging a relentless war on industry of the United States. Having failed in the Standard Oil, United States Steel, coal mines and other numerous enterprises, they have now chosen to capture the electric industry as an easy prey, because of its non-personal aspect."

From experience, Mr. Hilty said he had reached the conclusion that Government in the church creates a dominating government and a despotic church; that Government in business destroys competition, and that the absence of competition brings about deterioration, heavy taxation and an autocratic Government.

Paving of Back Country Roads Urged

An Opportunity to Relieve Traffic Congestion on Trunk-Line Highways and Improve Farm Conditions

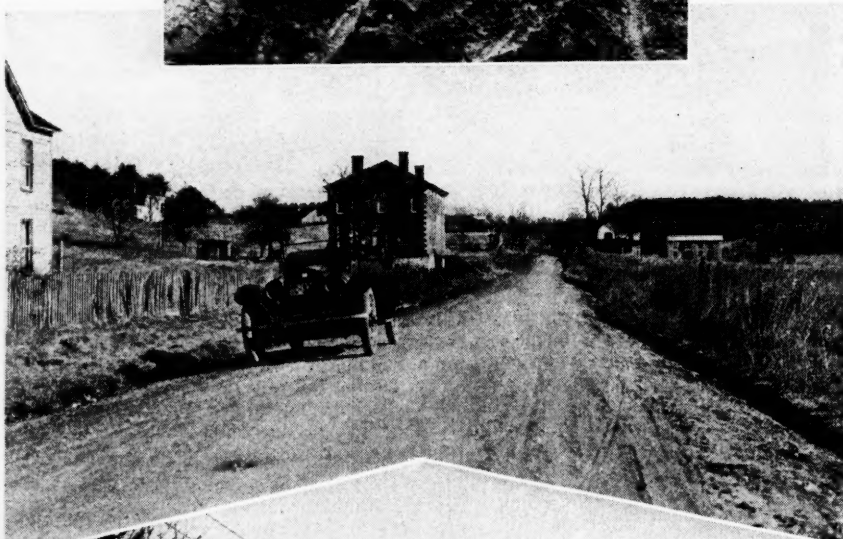
THE necessity for paving back country roads with durable, all-year, low-cost surfaces will be the keynote of the ninth annual asphalt paving conference to be held at the Hotel Peabody in Memphis, Tenn., December 1 to 5. A fourfold purpose is involved in this road-building scheme: Relieving week-end traffic congestion on the trunk-line highways in the United States and Canada; offering to the city motorist, driving merely for pleasure, an opportunity to get into the real country



and off congested routes; affording a greater number of farmers an opportunity "to get out of the mud," and developing better farm-to-market roads as feeders instead of competitors to the railroads. Equally important, however, will be another theme for discussion—that of coordinating rail, water, air and highway transportation in line with the policy of the Federal Government, and activities at present under consideration by the Department of Commerce.

Farm organization leaders ac-

Above—This muddy, unimproved road in Virginia a few years ago made travel difficult, and exacted a heavy toll in added operating and upkeep expenses on motor vehicles using it. After heavy rains and during the winter, driving over such roads was impeded.



Left—A gravel surface was the next step in development of an adequate highway, permitting year-round traffic when properly maintained, and this served with its drainage structures as a splendid base for the permanent roadway illustrated below.



A Federal-Aid Concrete Pavement Facilitates Low Cost Motor Vehicle Transportation

tively interested in the meeting believe it will go far toward inaugurating a nationwide movement for the improvement of farm-to-market roads. Road construction to date has not sufficiently benefited the farmers, according to S. H. Thompson of Chicago, president of the American Farm Bureau Federation:

"Of the 6,250,000 farms in the country, nearly 5,000,000 are located on dirt roads. There are 1,998,700 farms on dirt roads that boast some grading and draining, but there are over 2,747,000 farms located on absolutely unimproved roads. That makes a grand total of about 4,746,000 farms, out of 6,250,000. Of the balance, we find less than a million on gravel, and less than half a million on year-round surface roads."

Methods of salvaging the original investments in old dirt, gravel or water-bound macadam roads and utilizing them as bases for durable, low-cost surfaces suitable for motor traffic the year round, will be one of the principal subjects considered.

Prominent Speakers on Program

The meeting will be under auspices of the Asphalt Institute, J. E. Pennybacker of New York, managing director, and the Association of Asphalt Paving Technologists, C. A. Mullen of Montreal, secretary. Many of the state highway departments and a large number of county highway boards throughout the country, and street departments of leading cities will be represented. Speakers will include: Ernest N. Smith, Washington, executive vice-president American Automobile Association; R. H. Aishton, New York and Washington, chairman American Association of Railway Executives, and president American Railway Association.

An exhaustive program, dealing with many phases of highway construction, is being worked out by the organizing committee. Various technical subjects to be considered will be presented in the form of reports by committees created to make the necessary detailed surveys. Discussion of these reports, orally and in written form, will follow their presentation. Airport paving will receive considerable attention on the program, with a thorough discussion of the airport committee's survey of practice in asphalt runway paving and landing field treatment at numerous airports throughout the country. A special session on asphalt technology will be held under supervision of the Association of Asphalt Paving Technologists.

Wide Scope of Topics to Be Discussed

"Canada's Experience in Solving Local Road Problems" will be discussed by Horner P. Keith, chief maintenance engineer of Alberta Province, Canada;

J. J. Forrer, Richmond, State Maintenance Engineer, will speak on "The Development of a State Highway System"; E. F. Kelly, Chief of Research, U. S. Bureau of Public Roads, Washington, will speak on the subject, "Simplified Specifications for Asphaltic Materials"; Roy W. Green, president, Western Paving Laboratories, Lincoln, Neb., will discuss, "Economic Thickness of Foundation and Wearing Course"; J. T. Pauls, Senior Highway Engineer, U. S. Bureau of Public Roads, Washington, will talk on "The Mixed-in-place Method"; H. C. Weathers, testing engineer of the Florida Road Department, H. J. Spelman, chief engineer of the West Virginia Road Commission, C. S. Mullen of Montreal, and Clarence D. Pollack, consulting engineer of New York, will discuss the use of asphaltic materials for mat or carpet coats, mixed-in-place construction, cold mixed road types, and joint and crack fillers, respectively. W. E. Hawkins, construction engineer of the North Carolina Highway Department, and R. W. Coburn, construction engineer for the Massachusetts Department of Public Works are expected to discuss sand-asphalt pavement construction. Among the speakers will be: LeRoy M. Law, St. Louis, Mo., president, The Asphalt Institute; Prevost Hubbard, New York, president, Association of Asphalt Paving Technologists; Mayor Watkins Overton and City Engineer W. B. Fowler of Memphis; R. H. Baker, state highway commissioner of Tennessee; Charles H. Moorefield, state highway engineer of South Carolina; G. C. Uhl, chairman, Maryland State Roads Commission.

Reports of Investigating Committee a Feature

The following is a list of committees which will make reports on various subjects:

Committee on Widening of Pavements: B. E. Gray, highway engineer, The Asphalt Institute, New York, chairman; Charles S. Pope, chief construction engineer, California Division of Highways, Sacramento, and Daniel Soule, maintenance engineer, Rhode Island Board of Public Roads, Providence R. I.

Committee on Airport Surfacing: W. N. Carey, chief engineer, Department of Public Works, St. Paul, Minn., chairman; P. J. Freeman, chief engineer, Bureau of Tests and Specifications, Alleghany County Department of Public Works, Pittsburgh; Mark R. Thompson, engineer in charge of bituminous pavements, Board of Public Service, St. Louis, and Col. R. Keith Compton, director of public works, Richmond, Va.

Committee on Stage Construction: Charles E. Grubb, engineer-director, County Highway Officials' Division, American Road Builders' Association, Washington, D. C., chairman; T. C. McEwen, state highway engineer, Tennessee Highway Department, Nashville;

B. P. McWhorter, state highway engineer, Highway Board of Georgia, East Point, Ga.; F. H. Shepherd, engineer of maintenance, Queensboro Bureau of Highways, New York, and C. S. Christian, chief engineer, Arkansas Highway Commission, Little Rock.

Committee on Resurfacing: Frank L. Raschig, first assistant director, State Department of Highways, Columbus, O., chairman; Clarence Proctor, consulting engineer, Michigan Laboratories, Inc., Detroit, and Jacob L. Bauer, state highway engineer, New Jersey Highway Commission, Trenton.

Committee on Maintenance: Major F. M. Davison, engineer of maintenance, District of Columbia Highway Department, Washington, D. C., chairman; C. E. Myers, director, Department of City Transit, Philadelphia; J. B. Early, maintenance engineer, Texas Highway Department, Austin; W. E. Duckett, Hennepin county highway engineer, Minneapolis, and G. H. Delano, maintenance engineer, Massachusetts Department of Public Works, Boston.

\$1,750,000 Power Project

Transmission lines from the Ozark Dam at Powerside, Mo., to Aurora and from Springfield to Sedalia, in the same state, are well under way as part of the \$1,750,000 development program of the Empire District Electric Co., Springfield, Mo., a subsidiary of the Cities Service Co.

Involved in the program is the installation of five new turbines at the Ozark dam to increase the generating capacity to 27,000 horsepower. Up to this time about 30 miles of power line have been completed between Sedalia and Cole Camp, and crews of the Delta Construction Co., the contractor, are now clearing timber between the latter point and Springfield. Poles and other materials needed for both the high tension lines have already been delivered.

Ceramic Congress Interests the South

Papers and discussions of constructive nature are listed as features of the ceramic congress to be held under auspices of the American Ceramic Society, at Cleveland, February 22 to 28. The amount of space already engaged is reported to assure success for the exposition which also will be held.

The interest of the South in this congress is expected to be proportionate to the position of this section in the national ceramic field, producing more than \$80,000,000 in value of clay products out of \$400,000,000 for the country, or more than 20 per cent. Of approximately \$14,000,000 of domestic clay mined and sold in the United States, nearly \$7,000,000 or virtually 50 per cent, is contributed by the South.

Asks Shipbuilding Legislation

While 41 combination passenger-cargo ships are now under construction in the United States, at a cost of \$140,000,000, and further orders are in sight, urgent need for legislation to stimulate cargo ship construction was presented by Homer L. Ferguson, president of the Newport News Shipbuilding and Dry Dock Company, to the Society of Naval Architects and Marine Engineers, at a recent meeting.

Although the United States is second only to Great Britain in merchant ship construction, it is a very poor second, said Mr. Ferguson in his address as retiring president of the Society. Freight ships are the very backbone of the merchant marine, and "it is unthinkable that we should allow our freight ships to disappear from our foreign trade."

As American shipbuilding and operating costs are much higher than for other countries, Mr. Ferguson said that some form of helpful national legislation must be provided, and quoted a suggestion that the Government lend a larger percentage of first cost on cargo vessels, waive interest during construction and defer payment of interest for a period of years after completion of a ship.

\$3,000,000 Tampa Phosphate Plant

Tampa, Fla.—Work of filling in a site near Tampa for a \$3,000,000 superphosphate plant has been practically completed by the American Cyanamid Co., New York. The company has built a steel sheet pile bulkhead 1300 feet long and has dredged a turning basin, slips and a 27-foot channel from the bulkhead to the government ship channel in Tampa Bay. Spoil from dredging operations was used to fill in a plant site and causeway from the site to the shore. With the exception of driving piles and placing anchor rods, which was done by the Gulf Construction Co., company forces did all the work. Contract for Larssen steel sheet piles was awarded to Sheet Piling, Inc., Tampa, and the dredge was purchased from the Hollywood Dredging Co. Details for further work on the plant have not been determined.

Timber Stress Problems

Recent study of timber stresses by a subcommittee of the National Committee on Wood Utilization, Department of Commerce, is said by Chairman F. O. Dufour to inspire hope that many of the existing uncertainties pertaining to stress may be eliminated. Of the scores of species of woods used in building and

construction, only a few of the most important are commonly used for structural purposes where stress values play an essential part, but definite data on the strength properties of these few

is a great need, Mr. Dufour explains. The subcommittee already has accumulated much information which will be adapted to current grades of lumber produced.

\$20,000,000 Hospital Development

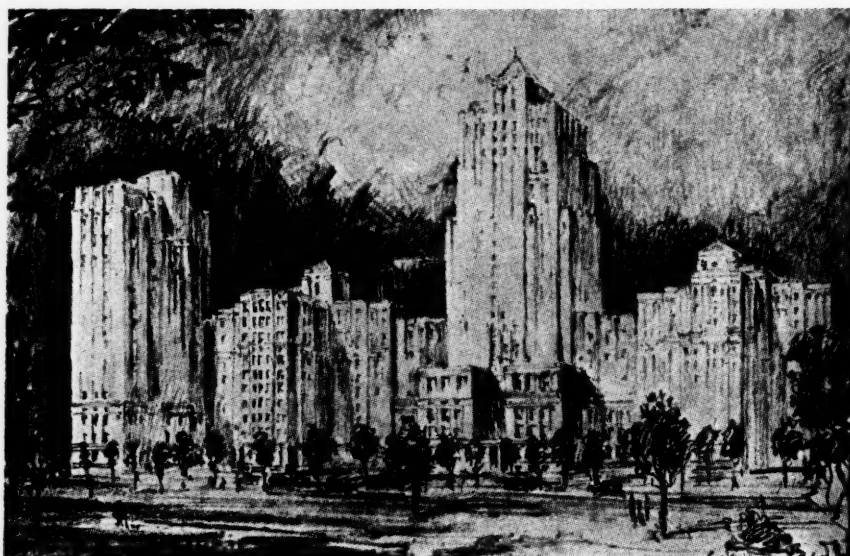
With a view to development of a \$20,000,000 group of hospital buildings where the present three-story structures now stand on Kingshighway boulevard opposite Forest Park, Barnes Hospital in St. Louis, Mo., associated with the Washington University School of Medicine, has begun an expansion program which will be continued as funds become available. Because of limited area of the hospital site, buildings will assume the proportions of skyscrapers rather than the conventional type.

First unit in the expansion program is the 8-story Rand-Johnson Memorial Building for the department of surgery now under construction and designed to replace a 3-story surgical wing of the present hospital. It will cost \$800,000 and has been designed and constructed to support three additional stories. A brick of variegated shades has been substituted for the somber brick forming the exteriors of the old buildings, while the interior decorative treatment will be carried out in color to produce a distinctly cheerful atmosphere. Operating rooms will be located on the south side of the building overlooking the park.

One floor will not be utilized at present, as the other seven will accommodate about 200 patients. When the eighth floor is opened the new building will accommodate some 250 patients, equal to capacity of the original buildings. Three prospective floors which may

be added later will accommodate 100 patients additional. Wilbur T. Trueblood and Hugo K. Graf, St. Louis, architects for the new building, have also designed a general scheme for complete development of the hospital group. A \$500,000 nurses' training school was completed about three years ago, for which Trueblood & Graf were the architects and the Selden-Breck Construction Co., St. Louis, general contractors.

For several years Washington University has been erecting buildings that will form an integral part of the future skyscraper medical center. The Oscar Johnson Institute and the McMillan Eye, Ear, Nose and Throat Hospital will both be housed in a 14-story building practically completed, for which Jamieson & Spearl are architects and the Woermann Construction Company, general contractor, both of St. Louis. Cost of the structure is about \$1,250,000. The University will erect also a \$450,000 Radiology Institute between Barnes Hospital and the St. Louis Children's Hospital, a 5-story building to serve the entire group of hospitals. Jamieson & Spearl are architects and the Dickie Construction Co., St. Louis, general contractor. The St. Louis Maternity Hospital, a 7-story structure with a capacity of 104 beds, was opened three years ago, plans having been prepared by Le Beaume & Klein and general contract handled by the John Hill Construction Co., St. Louis.



General Plan of Barnes Hospital Group, in St. Louis, Mo.

Manganese Producers Survey Their Industry

Announcement of the possibility of a tremendous increase in production of manganese in 1930 over records of past years was a feature of the third annual convention of the American Manganese Producers Association, held in Washington last week.

"From plants already producing or ready to produce during the early part of the year 1930, there was a rated capacity of over 200,000 tons per year, or a possible increase over 1928 of 400 per cent," said President J. Carson Adkerson, in his address.

Emphasis was expressed in papers and discussions on the necessity for manganese in military preparedness and on dangers for the industry through possible dumping of Russian manganese on the American market. Also the delegates studied the tentative draft of a bill by Senator Tasker L. Oddie titled, "A Bill to prohibit the importation of any article or merchandise from the Union of the Soviet Socialist Republic." Lack of "adequate market" was described as a handicap in development of the domestic manganese industry.

First saying that the provision of a duty of a cent a pound on metallic manganese was a boon to the industry, Mr. Adkerson explained that this action by Congress had been preceded within the industry by great developments in improved methods of beneficiation, largely in wet concentration, furnace concentration, magnetic separation, flotation and leaching.

"The production of lower grade manganese ores in the United States in 1929 was 1,200,000 tons," Mr. Adkerson said. "Production of high grade ores has increased from 13,000 tons in 1922 to 60,000 tons in 1929. The production of high grade ores in 1928 was 45,000 tons; in 1929, it was 60,000 tons or an increase of over 30 per cent. Give the manganese industry protection against Soviet Russia—give the industry a proper market for its ores, and immediately, as fast as contracts can be arranged for shipments, several thousand men will be put to work within the manganese industry in widely distributed areas throughout the United States."

Production of 1,200,000 tons per year of low grade manganese ore and 400,000 to 800,000 tons of high grade ore, he said, would mean a revenue in freight to the railroads alone of from \$6,000,000 to \$10,000,000 a year. The United States has between 200,000,000 and 400,000,000 tons of low grade ores, Mr. Adkerson stated, and processes have been developed for the recovery of high grade ores from these low grade deposits,

while the domestic ores produced by the newer methods of beneficiation "are higher grade than any other ores known in the world's market." American ores run from 45 to 60 per cent metallic manganese, with major production near 58 per cent, while foreign ores run from 43 to 52 per cent, he asserted.

In a telegram to the convention, Senator Oddie said:

"The manganese resources of the United States are extensive, being distributed geographically in some 34 states. This year, the output of metallurgical grade manganese ore would have exceeded 200,000 tons, or more than one-quarter of the domestic consumption, had it not been abruptly cut off by the dumping of Soviet ores. Manganese is essential to agriculture and the manufacture of steel and so important to our defense in time of war that this nation should be made independent of foreign sources of supply."

"Of the raw materials necessary to us in war, none is more important than manganese," said Frederick H. Payne, Assistant Secretary of War. "The problem of providing an adequate supply is aggravated by the fact that we largely rely on foreign sources to meet our demands in this material. Consequently, it is easy to see why we are so interested in the activities of the American Manganese Producers Association."

"We take a deep interest in the efforts of the domestic manganese producers to develop processes that would enable the United States to utilize its large deposits of low grade ore and be at least partially self-sustaining in this respect. The existence of an organization such as the American Manganese Producers Association implies a mobilization of the nation's manganese resources and makes available a direct means of contact with the industry. It can be of great assistance to the War Department in developing a national industrial program for the Nation's use, should we unfortunately be thrust into war."

Similar sentiments were expressed by Major Alfred H. Hobley, while R. S. Dean, of the Bureau of Mines, presented a technical paper on the work of the bureau on manganese.

"I want to touch on one other point which has not at all concerned the producer of manganese, but which, as the industry becomes established, may well do so—that is, uses of manganese," Mr. Dean concluded. "Are new uses being found for manganese, or will the steel industry find substitutes for manganese and eventually leave manganese in the status of silver? After sounding this pessimistic note, I am happy to state

that the work of the bureau on inclusions in steel has led to the development of a manganese-silicon alloy for use as a deoxidizer by means of which it has been possible to produce much cleaner steel than has heretofore been produced by commercial practice and that a number of plants are beginning to use this method of deoxidation."

Among the subjects discussed and the speakers were: "Manganese in Agriculture," Dr. Oswald N. Schreiner, Department of Agriculture; "World Manganese Situation," Joel Hurt, Jr., president of the Georgia Manganese & Iron Company, and Louis A. Smith, Bureau of Mines; "New Processes," E. S. Clark, Chapin Exploration Company; Albert E. Greene, Edward F. Goltra, Wilson Bradley, William B. Daly, Adrian Nagelvoort and K. M. Leute.

Former Ambassador James W. Gerard was toastmaster at an informal dinner at the Mayflower Hotel, at which "Effect of Soviet Five-Year Plan Upon American Industries" was the topic for discussion.

Government in Business

[From American Industries, Official Organ of National Association of Manufacturers.]

It cannot be emphasized too strongly that the function of our government is political and not economic. We recognize that the complexity of modern social relations requires the exercise of governmental authority in many fields under conditions unknown to our fathers. The political authority should not be exercised until its necessity is demonstrated and it is evident that the purpose to be accomplished is necessary for the public good and the means proposed may practically accomplish a necessary end.

We are now confronted in the nation and the states with many proposals to make the government, state or national, through bureaus, boards or commissions, the operator of a business or the exerciser of such forms of control over private enterprise, as make its officials substitute their judgement for that of private and responsible management. No American conception of government includes the operation of any form of business in competition with its own citizens or the substitution of the judgement of its officers for that of the chosen managers of those whose savings are invested in private enterprise. Experience not less than tradition and fundamental principle demands that we confine the functions of government to the political field and resist its entrance into the field of business operation and supervision.

IRON, STEEL AND METAL MARKET

Steel Demand Declines—Carnegie Steel Puts Minimum Price of 1.60c on Bars, Shapes and Plates

Pittsburgh, November 17—[Special]—The sum total of steel demand has slipped a trifle further in the past week. According to precedent it would continue declining to the end of the year, but from Chicago come expressions of opinion that the turn has been rounded and that while there is not likely to be much increase in the near future, demand has seen its lowest level.

Reflecting recent decreases in demand, the rate of steel production has continued downward. Measured in ingots the rate is about 43 to 44 per cent of capacity or a couple of points down in the week. There has been a practically continuous and fairly steady decrease since the end of August, that month having shown a slight increase over July.

Total production of steel ingots in the first half of this year was about 24,000,000 tons, while chances now are the second half will run 15,500,000 to 16,000,000 tons or scarcely two-thirds of the first half tonnage. In small part this decrease is seasonal, while in large part it is due to momentum in the first half of this year from the recent great industrial activity.

Steel consuming lines are so dull all around that it is hardly worth while to consider them individually. The one distinct exception is fabricated structural steel, which of late has been almost as active as early in the year, when it was running only slightly behind last year. The work runs hardly at all to hotels and office buildings and practically not at all to factories while there is an unusual amount of public work. Lettings of fabricated structural steel jobs reported last week totaled 35,000 tons, slightly above the weekly average this year, and 20,000 tons of this was in three jobs, including two subway jobs and one viaduct.

The Steel Corporation's unfilled obligations increased 57,425 tons in October, against decreases of 155,866 tons in September and 441,851 tons in August. By this comparison October seems to have witnessed much more business, but there is no doubt there were cancellations in the two preceding months by the corporation, of contracts unlikely to be specified, while in October there was a decrease in shipments. It was a good showing, however, for the bookings to exceed shipments at all.

Even with a large percentage increase in steel demand in the first quarter of the new year compared with the present quarter, the general pace in tonnage is a low one and the matter of prices is very important, as with strenuous competition and careless price-cutting, markets may get well below cost and it is always hard work to get them up again. Sheets, strips and wire products have already been allowed to get into the neighborhood of, or below, the cost line, particularly as unit costs rise with light operations. In bars, shapes and plates the general quotable market lately has been 1.60c, which would be moderately profitable, but in shapes and plates there has been deep cutting for months, chiefly in connection with fabricated structural steel work. The Carnegie Steel Company has made a very important announcement, that its minimum price on current business is 1.60c, and the presumption is that other sellers will adhere to this figure, realizing the dangers of price cutting. There is a theory, furthermore, that price stability would encourage buying all down the line. A similar action, in a weak and dull market, was taken three years ago and was followed by heavy demand and further advances.

Should bars, shapes and plates be stabilized it does not follow that other finished steel products would fall in line, as they have their own classes of competition. Sheets have weakened a trifle more in the past week, strips and wire products holding their former levels, which are altogether too low relative to costs.

The Pittsburgh district scrap market has been stagnant for three weeks and prices are declining, whereby dealers may soon be able to accumulate some speculative stocks.

Advance in Copper Price Features the Metals

New York, November 17—[Special.]—Copper has occupied a conspicuous place among the metals and in the business world over the past week. The rise in most shares on the New York Stock Exchange on Wednesday was attributed to the advance of one-half cent per pound in the price of the red metal, the second advance since early 1929, all other price changes—and there have been about a dozen—having been downward. On Thursday the price rose another cent to 11 cents.

The marking up in the price of copper was not altogether unexpected as indi-

cated by the manner in which the copper shares on the Exchange have resisted declining tendencies in other stocks. The immediate motive for the mark-up was the virtual conclusion of the international curtailment of production conference which had been held at New York for ten days or two weeks. According to reports, world producers, including those with African properties, have agreed to cut production 23,600 tons monthly, or 15 per cent, to start in two weeks.

Skepticism had been expressed in many quarters that the Katanga Company, the Belgian company with the very profitable mines in Africa, would agree to any such curtailment, for this company benefited from the distress of copper companies in other parts of the world, being such a low cost producer. According to newspaper reports from such widely separated points as London and Arizona the conferences were doomed to failure. Yet apparently they have been successful, though the producers have so far not made any official announcement.

But the copper industry is inclined to be rather secretive in showing its hand. In this matter of curtailment, too, there is the ticklish question of whether a violation of the Sherman anti-trust law would be involved. Producers feel that the Government will look kindly on it, since welfare in the copper industry will be one important step in restoring general prosperity. Moreover, the Government has apparently sanctioned concerted curtailment of output in the oil industry. A typical attitude of the copper producers is: "If it is against the law then we will gladly go to jail. The plight of the copper industry is desperate and drastic measures must be taken."

On the day the price of copper was lifted a half cent, October statistics were issued by the American Bureau of Metal Statistics, showing another gain in surplus stocks which are now within 9000 tons of the high record for all time at the end of April, 1921.

Surplus stocks of refined copper increased 4280 tons. Total stocks of blister and refined metal gained 8000 tons. Production declined and shipments increased, showing the correct trends. Refined output gained in aggregate, since October was a longer month, but the daily rate was less. Total copper shipments increased 10,000 tons, the major gain applying to domestic rather than foreign shipments. The statistics were met with only passing interest in view of the more important happenings in the industry.

Export sales have been averaging 3500

tons daily and would have been more had producers been willing to sell more. The advance in price was preceded by several days in which supplies of copper available at 9½c became tighter and tighter until finally the price was nominal only. At the start of business Wednesday the quotation became 10 cents and by noon the producers had withdrawn from the market. Domestic consumers came into the market for 1000 tons at a time in some cases but found it difficult to satisfy their needs. It was plainly a sellers' market.

Added to the more cheerful feeling in business circles were reports received at Detroit to the effect that demand for automobiles was catching up with the surplus. Metal producers are therefore hopeful that a better consumption of metals will follow in this line.

Prices of the other non-ferrous metals have been fairly steady. Lead has been unchanged at 5.10c per pound, New York. Zinc has steadied at 4½c per pound, East St. Louis, after selling for a short time at 4.45c, a price which compares with 3.95c two weeks ago. October zinc statistics revealed another sharp gain in surplus stocks but a sharp net decline in active retorts which indicates a curtailment of production similar to that planned in the copper industry.

Tin had a declining tendency, dipping to 25½c on Wednesday morning, only ½c above the extreme low point this year, though prices advanced one cent the next day. Tin sales on Wednesday were 150 tons but on other days were virtually nil.

Quicksilver is \$2 per flask lower at \$108. Antimony is a shade lower at 7c, duty paid. Silver has been steady at around 36c per ounce.

Further disappointment in the steel industry has materialized, with operations off 4 per cent in the past week. However, a turn for the better is predicted early next year.

Some Increase in Number of Pig Iron Inquiries

Birmingham, Ala., November 17—[Special.]—A little more activity is noted in the inquiry for pig iron, although order books for first quarter 1931 delivery are not yet reported opened. Small-lot orders are still numerous with specifications against them seeking delivery within a few days. Sale of upwards of 50,000 tons of iron to the American Radiator & Standard Sanitary Corporation for delivery during the remainder of this year and into 1931 gave an optimistic feeling, indicating that one of the larger consumers of iron had decided the bottom has been reached in

iron prices and that this is the opportune time to place business. Delivery instructions call for shipment of the iron in several directions where the big corporation has plants.

No new schedule of blast furnace operation in this district is out as yet. The Tennessee Coal, Iron & Railroad Company has eased off production of basic iron, with one of the larger blast furnaces at Fairfield out of commission.

In the steel mart, sheet and plate are commanding attention. Both the Tennessee Coal, Iron & Railroad Company and the Gulf States Steel Company are enjoying a fairly good demand for this shape, not much stock going into the warehouse. Railroads are apparently in no hurry to announce estimates on rail and accessories. Structural steel fabricators are enjoying patronage by reason of bridge-building activity in several Southern States. Specifications of size are reported in sight which ultimately will bring about healthy business on steel. Louisiana, for instance, plans rebuilding of docks, the building of a large mileage of new highways, erection of one or two steel and reinforced concrete bridges and a new State capitol. Industrial development under consideration in the Southern and Southeastern States will require structural and other shapes of steel during the next few months, the Birmingham fabricators keeping a close watch on the situation.

Birmingham Tank Co. is building a shop in Pittsburgh. This is a subsidiary of the Ingalls Iron Works Co. The Ingalls Company has a fabricating shop at Verona, suburb of Pittsburgh and is

doing well with it. The Birmingham tank shop is operating on almost full schedule with contracts in hand for many tanks.

Coal operators of the Birmingham district are watching the demonstration of the DeBardeleben Coal Corporation through its subsidiary, Bulk Transportation Corporation, in using a remodeled steel steamship in handling coal on the gulf coast, with Pensacola as the base. The steamship will haul 7500 tons of coal on the trip, the fuel being loaded and unloaded mechanically thereby reducing cost of transportation. The Frisco Railroad is handling the coal from the Birmingham district in trainloads to Pensacola. The steamship will handle phosphate rock, sulphur, fruit and other products on return trips. The architecture of the steamship is altogether different from that of any coal handling boats on the Atlantic, the Pacific or the Gulf.

The coke market is unchanged. The scrap iron and steel market is still dull with prices low and weak.

QUOTATIONS ON PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$14.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$14.50; iron of 2.75 to 3.25 per cent silicon, \$15.00; iron of 3.25 to 3.75 per cent silicon, \$15.50.

OLD MATERIAL.

Old steel axles	\$14.00 to \$15.50
Old iron axles	15.00 to 16.00
Old steel rails	12.00 to 12.50
Heavy melting steel	10.00 to 11.00
No. 1 cast	9.50 to 10.50
Stove plate	8.50 to 9.50
No. 1 railroad wrought	9.50 to 10.00
Old car wheels	10.00 to 11.00
Old tramcar wheels	10.00 to 11.50
Machine shop turnings	7.50 to 8.00
Cast-iron borings	7.50 to 8.00
Cast-iron borings, chem.	12.50 to 13.00
Re-rolling rails	12.50 to 13.00

Brick Research at Virginia Polytechnic

Problems of the national brick industry will be studied in the ceramic engineering department of the Virginia Polytechnic Institute, Blacksburg, under a plan of research devised by the Common Brick Manufacturers Association of America. The Institute was the first university or college accepted by the association for such cooperative work.

The Virginia Polytechnic equipment includes a 10,000-pound capacity Olsen Universal testing machine; 100,000-pound capacity Olsen universal testing machine; 100,000-pound Reihle testing machine; 200,000-pound Olsen hydraulic compression testing machine; 60,000-inch-pound torsion testing machine; 10,000-pound transverse testing machine; impact machine; oil fired muffle kiln; oil fired, down draft, test kiln; electric furnace; small gas fired frit furnace; induction furnace for determining P. C. E.; small regulated electric

dryer, 600 degrees Fahr. capacity; steam dryer; damp box; Goodner mercury volumeter; adequate balances; stone and copper tank for determining absorption; 1000-pound capacity Reihle tensile strength and transverse strength machine; 20,000-brick capacity auger machine; wet and dry pan; dry press (for brick and tile) pottery lathe; jolly and jigger; clay washing and mixing machine; filter press; magnetic separator; ro-tap machine with complete set of sieves ranging from 4-mesh to 250-mesh; gyrotory riddle with screens ranging from 4-mesh; 100-mesh Allis-Chalmers crusher; crushing rolls; plate grinder; hand operated auger machine for making small test samples; direct driven six jar ball mill.

The Engineering Experiment Station published a bulletin, last March, detailing the physical properties of common and face brick manufactured in Virginia.

HIGHWAYS AND MOTOR TRANSPORT

9400 Miles Federal-Aid Roads Completed in 1930

Improvements were completed on 9349 miles of Federal-aid highways in continental United States and Hawaii during the fiscal year of 1930, according to the Bureau of Public Roads of the United States Department of Agriculture. At the end of that period 9915 miles of roads were in process of improvement and 3469 miles were approved for construction. Federal funds disbursed on active road and bridge projects amounted to \$75,880,963, or about \$6,200,000 below the figure for 1929.

The mileage improved during the year with Federal aid was divided into three classes: 7317 miles upon which no Federal funds have previously been spent; 2011 miles further improvement by additional joint cooperation of the State and Federal governments, and 21 miles reconstructed and improved with more durable surfaces.

With authorization of Federal funds for each of the years 1931, 1932 and 1933 increased to \$125,000,000 the Bureau of Public Roads anticipates an increase in the mileages improved. The original authorization of \$75,000,000 for 1931 was increased by the apportionment of an additional \$50,000,000 in April, and the States immediately responded by increasing allotments for definite projects to \$102,498,084 for the fiscal years, as compared with \$70,428,896 during the year of 1929.

As a result of this increase it was noted that the number of workers employed on road construction in April was more than 4000 greater than in the same month of 1929. May and June also showed increased employment of 4800 and 1300 men respectively, as compared with the 1929 construction force. In August, the Federal-aid road program alone gave employment to more than 48,000 men.

The Federal-aid system at the close of the 1930 fiscal year was composed of 193,049 miles of highways. Of the 84,012 miles in the Federal-aid system classified as improved with Federal funds at the end of 1930, 12,448 miles are graded and drained earth roads; 7166 miles, untreated clay roads; 17 miles, bituminous treated sand-clay; 26,608 miles have untreated gravel surfaces and 482 miles bituminous-treated gravel surfaces; 1754 miles have waterbound macadam surfaces; 603 miles are surfaced with bituminous-treated macadam; 742 miles are improved with low-cost bituminous mixed surfaces; 4057 miles are surfaced with bituminous ma-

cadam; 3205 miles are paved with bituminous concrete; 23,693 miles are Portland cement concrete pavements, and 905 miles are block pavements. The remaining 332 miles consist of bridges, each of more than 200 feet span, and their approaches.

Road Construction Films

Washington, D. C.—The Bureau of Public Roads, United States Department of Agriculture, has released a new series of road construction films for the use of highway engineers, road builders, engineering students and others interested in good roads. One film is devoted to Mixed-in-Place Bituminous Surfaces, another to Penetration Bituminous Macadam, and still another to Hot-Mixed Bituminous Pavements. Prospective borrowers should apply to the Office of Motion Pictures, of the Department.

Highway Research Meeting

During a meeting called for Dec. 11 and 12 at Washington, the Highway Research Board of the National Research Council will receive reports on special investigations and research activities.

Among the subjects of the committee reports are: Highway Finance; Transportation Cost Analysis; Maintenance Costs; Effect of Flat and Elongated Particles in Aggregates, and of Dust Coatings on Aggregates; Construction Method and Appliance Developments; Classification and Characteristics of Bitumen for Surface Application; Ice Removal; Filler for Brick and Block Pavements, and the Method for Rectifying Pavement Settlement.

Traffic control mechanisms, traffic capacity, the accident-prone driver, traffic survey methods and forms, financial responsibility, vehicle and highway mechanism as related to traffic, extent and desirability for State control of traffic regulation in municipalities, and law observance and enforcement methods constitute other topics.

The topics of the special investigations are: Curing of Concrete Pavements, Use of Rail Steel for Reinforcing, and Methods for Field Investigations of Culvert Performance.

Research papers to be presented are: Some Experience in Design of Concrete Mixtures, Bert Myers, Iowa Highway Commission; Durability of Concrete, C. H. Sholer, Kansas State College; A Study of the Strength of Concrete As Made in Cuba, Miguel Villa, Havana University; Cost Economics in Concrete

Bridges, C. B. McCulough, Oregon State Highway Commission, and the Relation of Certain Frost Phenomena to the Subgrade by V. R. Burton and A. C. Benkelman.

To Let \$1,624,000 Contracts

Atlanta, Ga.—On November 25 the Georgia State Highway Commission, of which J. W. Barnett is chairman, will award road and bridge construction contracts involving \$1,624,000. Work on the various projects, which are generally located throughout the State, will begin very soon. Road construction in South Georgia will continue all winter.

33,000-MILE ROAD SYSTEM

Governor Horton Outlines Plans to Extend Rural Maintenance in Tennessee

Plans for a state-maintained system of highways to embrace 33,000 miles, have been outlined by Governor Henry H. Horton of Tennessee, who details the proposed program as follows:

"The State Primary System, and detours incident thereto, at the present time totals approximately 7500 miles. The general session of the Legislature of 1929 set aside one cent of the gasoline tax for the purpose of maintaining rural roads. One cent of the gasoline tax in Tennessee will produce during the present year approximately \$2,100,000, and with this fund the Tennessee Department of Highways and Public Works is maintaining, or supervising the maintenance of, approximately 12,500 miles of the most important roads of the State not included in the Primary System. We therefore, under our present plan, are maintaining approximately 20,000 miles of road in Tennessee.

"It is my plan to request the Legislature of 1931 to provide an additional one cent of the gasoline tax for the extension of our rural road maintenance plan. Under this proposed extension we expect to include not less than 13,000 miles of additional rural roads, which will bring the total mileage of roads under the care and supervision of the Department of Highways and Public Works to a minimum of 33,000 miles. We would not undertake to divert these funds from the Primary State Highway System were it not for the fact that our system of primary roads is, as a whole, in an excellent condition, and we therefore feel that Tennessee has reached the stage in its highway development plan of extending its maintenance so as to reach and benefit all rural communities."

Brownsville an Important Air Terminal

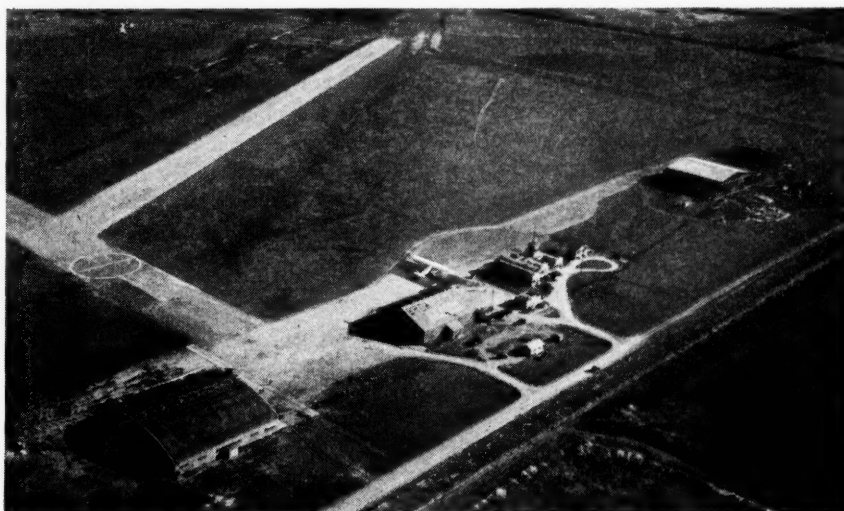
For Central and South American Air Travel

In less than two years a barren tract of land at Brownsville, Texas, has been converted into a municipal airport that recently was recommended for an AIA classification by the United States Department of Commerce, the third airport in the country to receive such classification. This rapidly developing port comprises 376 acres of land, with an additional reserve of 80 acres. It is approximately three-quarters of a mile square, there being no obstructions to approach by air from any side, except the airport buildings. Two runways, each 100 feet wide—one east-west, 2700 feet long, and the other northeast-southwest, 2500 feet in length—are constructed of caliche gravel.

The lighting system and night markings are complete in every detail, and include the additional feature of a huge Neon sign with letters 18 feet high, which can be seen for a distance of ten miles. A standard revolving beacon and flood lights are part of this lighting arrangement. Three of the four hangars, all of steel construction with concrete aprons, are 100 by 120 feet, the other 80 by 100 feet. A Spanish type administration building houses all airport officials, weather bureau officials, customs and immigration inspectors, radio crew and other personnel, which altogether numbers about 175 employees with an annual payroll of approximately \$450,000.

One of the most complete shops in the country is maintained at the Brownsville airport by the Pan-American Airways, lessee of the field; this shop does all the overhauling, servicing, testing, rebuilding and other mechanical and engineering work. After every 250 hours of flying time the huge tri-motor Ford and Fokker planes used by the company are overhauled, the motors being taken down and rebuilt. The entire plane is taken down and rebuilt on completion of 1000 hours in the air.

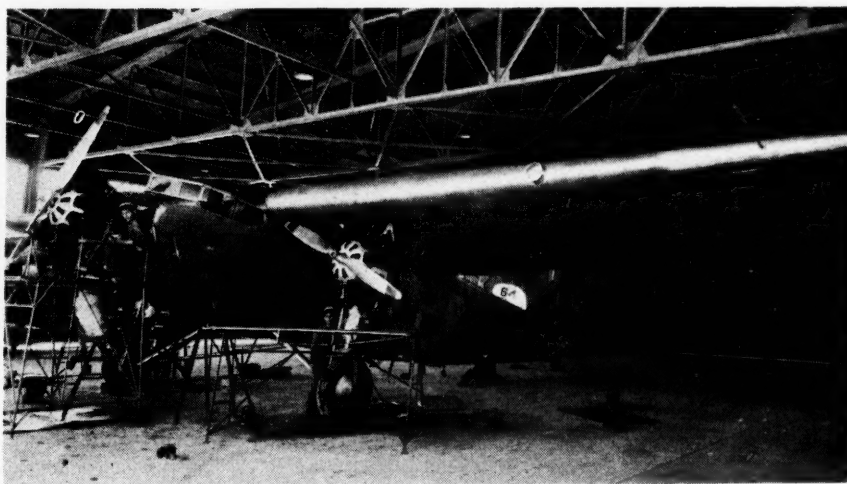
The Pan-American Airways lines out of Brownsville extend into Mexico to Mexico City, Vera Cruz and points further South, and into South America by way of Tampico. Other lines operating regularly out of the airport, where ten planes call and leave daily, are the Corporacion Aeronautica de Transportes, a Mexican company running to Monterey, the industrial capital of Northern Mexico; the Southern Air Transport, operating passenger and mail planes to San Antonio, and the Texas Air Transport which also carries mail from Brownsville to points north.



Runways and Buildings of the Brownsville Airport



Partial View of Brownsville, Showing International Bridge

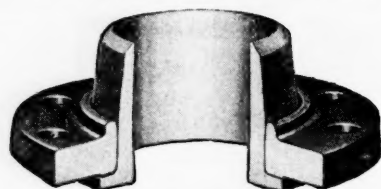


Workmen Going Over a Tri-Motor Ford at Pan-American Shops

NEW AND IMPROVED EQUIPMENT

Flanged Joint for Pipe Lines

For use on welded pipe lines where such a joint is required for the insertion of valves and fittings for taking off outlets, a new type of flanged joint has been developed by the Merco Nord-

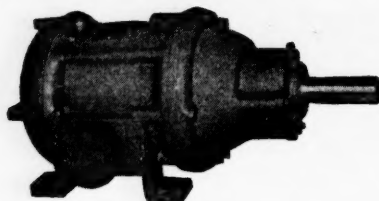


Flange Fitted to Tapered Nipple

strom Valve Co., San Francisco, Cal. Known as the Merco swivel flange, it consists of a drop forged steel flange, fitted to a tapered nipple on which the flange may be rotated, permitting alignment of bolts, etc. The nipple is forged from a solid steel billet, the finished product having its greatest thickness at the base where highest stress occurs. An advantage of the flange is its flexibility, with additional advantage where service requires a special alloy such as the new chrome nickel steels. For such service, the tapered nipple only is forged from the alloy, while the flange is forged from ordinary steel. The tongue and groove type of construction may also be had and flanges may be furnished with pipe nipples of various lengths welded on before leaving the factory. The company plans production of sizes from 1½-inches to 10-inches.

Motorized Speed Reducers

The production of motorized speed reducers in capacities up to and including 20 horsepower, has been announced by the Production Equipment Company, Cleveland, Ohio. The reducer consists of a standard heavy duty electric motor with integral planetary gear reduction unit mounted in an oil-tight housing. All motors are built by the company and may be supplied in single speed, multi-speed, enclosed and high torque designs for either horizontal or vertical mountings. The motorized speed reducer is a compact unit, providing straight line drive with speeds as low as 50 to 550 r. p. m.

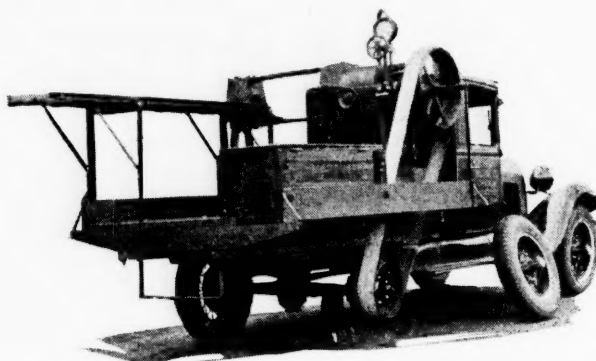


For Direct Coupling

Hydraulic Track Chain Press

A special hydraulic press has been designed by the Tomlin-Harris Machine Co., Cordele, Ga., to be used for repairs on the crawler type of tractor. The press is mounted on a small truck and is operated by a pulley from the rear wheel, its purpose being to remove the

pins and bushings in the track of the tractor. The point is emphasized that the bushings or space blocks wear only on the sprocket side, and where repairs are made before the space block is worn entirely through, the pin is removed, the space block reversed, and it is thus unnecessary to purchase new parts. It is said to be feasible to use this hydraulic press on repair jobs 200 miles distant.

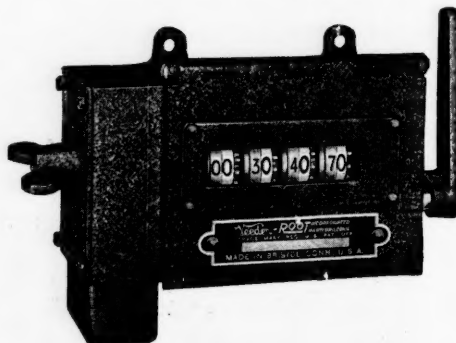


Designed for Use in the Repair of Tractor Chains

Root Type Predetermined Counter

As its newest development, Veeder-Root Incorporated, Hartford, Conn., has introduced a predetermined counter that may be set to any desired number within its capacity, and when that number is reached, it will make or break contact in an electric contactor which is part of the counter. The counter itself has two distinct sets of figure wheels, the counting wheels consisting of large black figures on white wheels and the predetermining wheels of small black figures on metal wheels. The machine is installed to operate mechanically and

144, the predetermining wheels show all zeros and the counter will automatically close the contacting points, forming an electric circuit, stopping the machine or giving an alarm to the operator. To stop individual motor driven machines, only simple wiring to the starter box is necessary, while for belt-driven machines the company provides an electric stop motion to be used in combination with the counter which will shift the belts or operate a clutch as required. The standard counter is constructed with shaft on either right or left hand end of the counter, to operate as a rotary, rotary ratchet or ratchet drive instrument, with or without lever stops and return lever spring as may be specified and with either top-coming or top-going rotation of shaft.



Useful in Solving Problems of Production Control

register each piece produced. The number 144 is set on the metal wheels and when 144 pieces have been produced, the counting wheels show the figures

Martin L. Markel is president of the Superior Mineral Products Co., Somerset, Pa., which is to operate the property.

To Develop Kaolin Deposit

Dry Branch, Ga.—After making surveys of the recently acquired Nelson kaolin deposit here Robert Spencer Finney, New York, and associates, will erect a drying shed in connection with plant facilities proposed for developing the property. The first unit of the plant, which is to use the air-floating process, is to have a capacity of 100 tons daily.

CONSTRUCTION DEPARTMENT

and

NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ala., Mobile—See Sewer Construction.

La., New Orleans—Orleans Levee Bd., John Klorer, Ch. Engr., considering plans and specifications for proposed \$1,000,000 airport on Lake Pontchartrain. 11-13

Md., Baltimore—Glenn L. Martin Co., Glenn L. Martin, Pres., Middle River, erecting office building, 46x20 ft.; frame, Celotex insulation; building 2 runways, each about 50 ft. wide, 1800 ft. long; may later erect hotel and make other terminal improvements; construction by owner's forces; Paul E. Tignor, Field Engr. in charge.

Mo., Springfield—Airport Committee plans completion of administration building; Transcontinental and Western Air Line, Inc., will install radio broadcasting equipment; W. W. Johnson, Contr.

Okla., Oklahoma City—W. J. McKenzie, Airport Specialist, Dept. of Commerce, Washington, D. C., approved site and plans for municipal airport; Charles J. Russell, Airport Engr., Hightower Bldg., preparing plans. 10-9

Tex., San Angelo—City, reported, votes soon on acquisition of land outside city limits for airport and for authorization of \$75,000 bond issue.

Tex., Dallas—Bd. of Directors of Dallas Chamber of Commerce interested in improvements to Hensley Field airport, including hangar, apron drainage, roads, modern quarters, etc.; seeking \$46,000 appropriation.

Tex., Galveston—City, reported, let contract to Beretta-Stiles Co., National Bank of Commerce Bldg., San Antonio, for construction of municipal airport.

Bridges, Culverts and Viaducts

Proposed Construction

Ala., Mobile—H. D. Bacon may build bridge between Dauphine Island and Fort Gaines in connection with plan to establish hotel and amusement facilities.

D. C., Washington—District Commrs., Roland M. Brennan, Ch. Clk., Engr. Dept., plans rebuilding Monroe St. viaduct over tracks of Baltimore & Ohio R. R., H. A. Lane, Ch. Engr., Baltimore, Md.

Georgia—State Highway Bd. receives bids for 17 bridges. See Roads, Streets and Paving.

La., Coushatta—State Highway Comsn., O. K. Allen, Baton Rouge, opens bids Jan. 2 for Red River bridge here.

La., New Orleans—Following estimating on railway swing bridge over site of Louisiana-Texas Intracoastal Waterway and Bayou Sale Branch of Texas and New Orleans R. R. Co., bids to be opened Dec. 3 by U. S. Engr. Office First New Orleans, Dist. 4400 Dauphine St.; W. Horace Williams Co., Southern Bldg.; Doullut & Ewin, Inc., Queen & Crescent Bldg.; Virginia Bridge & Iron Co., Whitney Bank Bldg., all New Orleans; Theo. O. Hordard, 1337 Brooklyn St., Algiers, La.; Nashville Bridge & Iron Co., foot of Shelby Ave., Nashville, Tenn.; and Bravo Contracting Co., Neville Island, Pittsburgh, Pa. 11-13

La., Ponchatoula—See Drainage, Dredging and Irrigation.

Miss., Jackson—Hinds County Supvrs., W. W. Downing, Clk., open bids Dec. 3 for conc. and iron bridge, Third Supvrs. Dist.

Miss., Summer—Tallahatchie County Supvrs., Mrs. D. S. Henderson, Clk., open bids Dec. 1 for bridge 60 ft. long and bridge 80 ft. long, Beat 3.

Miss., Woodville—Wilkinson County Supvrs., C. A. Coon, Chancery Clk., opens bids Dec. 3 for bridge over Buffalo Canal, known as Hamilton Ditch.

Mo., Clayton, St. Louis—St. Louis County applied to Missouri Public Service Comsn., Jefferson City, for permission to build subway at Valley Park, under tracks of Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis; \$36,000; also for permission to eliminate grade crossing at Ferguson by building \$63,600 subway at intersection with tracks of Wabash Ry. Co., M. F. Longwill, Ch. Engr.

N. C., Sanford—Lee County Commrs., Sanford, and Chatham County Commrs., Pittsboro, plan rebuilding bridge over Deep River at Cumcock.

Okla., Tulsa—City, H. A. Parker, Engr., draw plans at once for Quanah Ave. viaduct over tracks of St. Louis-San Francisco Ry., F. G. Jonah, Ch. Engr., St. Louis, Mo., and Midland Valley R. R. Co., C. Kaighn, Ch. Engr., Muskogee.

Tenn., Memphis—Shelby County Commrs., E. W. Hale, Chmn., open bids Nov. 24 for steel bridge with conc. foundation over Wolf River, 2 mi. north of Germantown, 112½-ft. steel truss span, 2 15-ft. I-beam approach spans on creosote bents erected by County; also for 60-ft. span steel bridge over old channel near above mentioned bridge, substructure to be built by County.

Tennessee—State Dept. of Highways and Public Works, Nashville, has plans approved by War Dept., Washington, for bridge over Harpeth River, 25 mi. west of Nashville.

Texas—See Roads, Streets and Paving.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, probably open bids about Nov. 29 for 280.5-ft. steel, conc. and timber pile trestle bridge approaches and foundation over Clear Fork of Brazos River, length over all, 1339.8 ft., roadway 22 ft. wide, \$22,000; G. G. Wickline, State Bridge Engr., Austin.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, considering replacing suspension bridge over Brazos River, Young County; \$100,000.

Tex., Houston—City Council, Fred W. Turner, City Sec., approved plans for building \$12,000 bridge over Country Club Bayou at Wayside Drive.

Tex., San Angelo—Tom Green County, Earl Beavers, County Engr., opens bids Dec. 8 for Oaks St. bridge; 500 ft. long, conc. and steel; cost \$80,000 to \$100,000.

Virginia—State Dept. of Highways, C. S. Mullen, Ch. Engr., Richmond, has low bids for 5 bridges: Nelson County—rein. conc. bridge over Blackwater Creek, 4 mi. from Arrington, \$535B2, Blount & Hayman, Brodnax, \$8006; rein. conc. bridge over Tye River, 7 mi. from Arrington, \$535B3, Fredericksburg Bridge Co., Fredericksburg, \$11,408; rein. conc. span over Jenny's Creek, \$535B4, John P. Harvey, Inc., Roanoke, \$4705; Buckingham County—rein. conc. span over Slate River, Route 13, \$658B1, Blount & Hayman, \$14,202; Lee County—bridge over Powell River, 7 mi. from Pennington Gap, M. T. McArthur, Johnson City, Tenn. 10-30

West Virginia—State Roads Comsn., C. P. Fortney, Chmn., Charleston, let contract about Jan. 1 for bridge over Twelve Pole Creek, portion of super-highway between Huntington and Big Sandy River.

Contracts Awarded

Florida—See Roads, Streets and Paving.

Mo., Ferguson—Wabash Ry. Co., M. F. Longwill, Ch. Engr., St. Louis, has construction under way on conc. pile trestle with I-beam spans and solid floor for 5 tracks; Hannan & Everett Construction Co., Boatmans Bank Bldg., St. Louis, Gen. Contr. 11-13

W. Va., Huntington—City let contract to George Pence for fills to Madison Ave.-Piedmont road bridge.

Canning and Packing Plants

Fla., Brooksville—F. & M. Packing Co., Traverse City, Mich., reported, plans canning plant.

Fla., Fort Pierce—Indian River Sub Citrus Exchange organized Indian River Canneries, capital \$100,000; establish grapefruit canning plant; also juice freezing plant at Cocoa. 9-4

Fla., Lake Hamilton—Lake Hamilton Exchange, reported, plans addition.

Fla., Miami—Riverside Canning Co., W. C. Mudge, 68 W. Flagler St., erect \$100,000 canning plant.

Fla., Miami—Ivans Petit, Burlington, N. J., reported, leased warehouse at Municipal Docks for canning plant.

Fla., Miami—Good Morning, Inc., Paul Schubert, 127 N. E. First Ave., leased building, 2901 N. W. Seventh Ave. for extraction plant and cannery.

Fla., Titusville—A. C. Terwilliger, 418 Washington Ave., reported, let contract to G. W. Matthews & Co., 734 Brokham Drive, Orlando, for construction of freezing plant for handling orange juice in frozen form; cost \$45,000; arrangements have been made with Pure Orange Juice Co., Chicago, Ill., to handle local products; will organize Frozen Juice, Inc.; product will be put in packages ranging from 4 oz. to 1 gal.

S. C., Charleston—Leo F. Reynolds, 1304 Gladden St., Columbia, reported, investigating possibilities of establishing plant to be operated by Icebound Products Co., for freezing of fruits, vegetables, etc.

Tex., La Feria—W. A. Carron, reported, let contract to W. A. Strickland for second unit of canning plant.

Clayworking Plants

Ga., Gardners—Edgar Brothers Co., Metuchen, N. J., reported, erect clay plant with capacity of 75,000 tons yearly; has kaolin deposits in Washington County, plant at McIntyre.

Ga., Dry Branch—Robert Spencer Finney, 3816 Review Place, New York, advises that operation consisting of mining, refining and marketing kaolin or China clay calls for steam shovel, cars and locomotive for removal of overburden, air pressure spade drill for taking down clay walls, crusher, indirect heat rotary dryer, pulverizer, and air separation units; will not install washing plant; New York Office, 225 Broadway. 11-6

Coal Mines and Coke Ovens

Tennessee—Walter T. and Edgar B. Shaffer, Akron, O., purchased from C. G. Baugh, Mineral Bluff, Ga., 5000 acres of hardwood timber and coal lands in Bledsoe county; property contains 3 seams of coal; will develop for timber, coal, fire clay and drill for oil.

W. Va., Fairmont—Three Cities Fuel Corp., reported, formed with capital of \$2,500,000 by C. W. Watson, Fairmont Farms; George M. Alexander, J. H. Thomas and C. W. Green, all Fairmont; will acquire and operate about 45 mining properties in Harrison, Marion, Monongalia, Barbour and Taylor counties, having annual production of 5,000,000 tons.

Concrete and Cement Plants

Tex., Houston—Houston Concrete Pipe Co., 2120 Pannell St., increased capital \$20,000 to \$30,000.

Cotton Compresses and Gins

Tex., Edinburg—Fayville and Electric Gin Co., capital \$34,000, incorporated; J. A. Edmiston, W. L. Lipscomb.

Drainage, Dredging and Irrigation

Ark., Osceola—Bd. of Commrs. of Sub-Dist. 1, Dead Timber Drainage Dist. 13, Mississippi County, let contract to C. Erickson, Pennington, Mich., at \$0.0845 per cu. yd. for 2,289,000 cu. yd. earth excavation, 965 lin. ft. timber bridges.

La., Ponchatoula—Commrs. of Gravity Drainage Dist. No. 2 of Tangipahoa Parish, reported, has low bid from Boone & Wester, Queen and Crescent Bldg., New Orleans, for gravity drainage system, involving earth excavation for drainage channels, clearing and cleaning natural stream channels and building rein. conc. and timber bridges; E. G. Freiler, Engr., Hammond. 10-23

S. C., Charleston—Standard Oil Co., Peoples Bldg., let contract to Simons-Maynard Co., Peoples Bldg., at \$13,797 for yacht basin.

Tex., Houston—U. S. Engr. Office, Galveston, probably start work about Jan. 1 widening Houston Ship Channel, Morgan's Cut to point 4000 ft. above Baytown; plans call for widening waterway to 250 ft. through Morgan's Cut and widening to 200 ft. from Morgan's Cut to 4000 ft. above Baytown; \$200,000 advanced by Harris County Navigation Dist. accepted by U. S. Engr. Dept., Washington.

Tex., Liberty—Old River Drainage Dist. expend \$25,000 for improvements. See Financial News Columns.

Tex., Mission—Frank Dudley, W. R. Parrish, W. H. Douglass, Earl Johnson and L. H. Smith, all Mission, hold election Nov. 22 on organization of Hidalgo County Water Control and Improvement Dist. No. 13 to purchase and assume management of Mission properties of United Irrigation Co., a Shary interest.

West Virginia—War Dept. allotted \$25,000 to U. S. Engr. Office, Charleston, to finish surveys on lower Kanawha River improvement projects.

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ga., Augusta—Paul M. Thayer and associates, reported, granted franchise to manufacture and distribute electricity; plans organizing local company to take over franchise; erect plant; first unit to be in operation in 2 years; Mr. Thayer, reported, representing Nordberg Manufacturing Co., Milwaukee, Wis. 11-13

Kentucky—State Railroad and Public Utilities Comsn., Nashville, Tenn., reported, has under advisement application of Robt. H. McNeill, National Press Bldg., Washington, D. C., of Southern Industries & Utilities, Inc., for development of water power on Tennessee River near Aurora Landing; proposed dam will be constructed across Tennessee line in Kentucky, but reservoir will flood Tennessee lands, about 129,973 acres; second hearing to be held at Frankfort, Ky., Dec. 9. 7-17

Ky., Ashland—J. W. Garner, McComb, reported, applied for permission to install high tension line; generate power at Grand Junction, Tenn.

La., Colfax—Town, reported, delayed date of election to vote on issuance of \$40,000 bonds for municipally owned electric system and for \$250,000 bonds to extend and improve water works system. 10-23

Mo., Poplar Bluff—Bd. of Public Works install \$43,000 turbine.

Mo., St. Louis—Century Electric Co., 1806 Pine St., reported, let contract to Superior Structural Steel Co., 5100 Farlin St., St. Louis, for 120 tons struc. shapes for plant addition.

Okl., Cushing—City votes Dec. 2 on \$300,000 bonds for constructing plant and distributing and transmission lines.

Tenn., Memphis—City, Sam M. Jackson, Commr. Public Works, will change gas street lights to electric.

Virginia—Virginia Electric and Power Co., Richmond, seeking permission from Bd. of Directors for expenditure of \$500,000 for constructing 110,000 volt transmission line to connect Roanoke Rapids power plant with Richmond, Petersburg, Hopewell, Norfolk circuit; present plans include building of line from Roanoke Rapids to Petersburg; Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass., Constr. Engrs.

Va., Winchester—Northern Virginia Power Co., reported, plans power transmission line from substation at Manganese Mine to Wardensville, W. Va.

Flour, Feed and Meal Mills

Ark., Jonesboro—Jonesboro Roller Mill, J. Hardy Little, Pres., reported, rebuild flour mill burned at loss of \$100,000.

Miss., Biloxi—Biloxi Grit Co., J. H. Cook, Mgr., rebuild burned plant.

Garages and Filling Stations

Ala., Mobile—L. G. Adams Co., Inc., capital \$25,000, incorporated; L. G. Adams, Carlin St.

Fla., Clearwater—Clearwater U-Drive It Co., Inc., chartered; F. K. Dorrance, J. P. Parker.

Fla., Miami—Goodrich Rubber Co., John W. Tulloss, Repr., reported, contemplate construction of \$200,000 service station and distributing plant.

Ga., Abbeville—L. H. House, Fitzgerald, reported, has contract for service station for Wm. R. Bowen, Fitzgerald.

Ga., Cochran—Wofford Oil Co. of Georgia, 140 Spring St., Atlanta, erecting brick and steel building, 100x132 ft.; steel roof trusses; E. F. Hettrick, Engr. and Builder, 502 Norris Bldg., Atlanta.

La., Alexandria—Shell Petroleum Co., Xavier St., reported, constructing \$10,000 service station, Bolton and Lee Sts.

Md., Baltimore—American Oil Co., American Bldg., received low bid from Thos. F. Leonard, 3615 Brehms Lane, for Lord Baltimore filling station Belair Rd. and Parkmont Ave., brick, stucco, 1 story; received low bid from Lacchi Construction Co., Munsey Bldg., for Lord Baltimore filling station, 33rd and Old York Rd., brick and stucco, 1 story.

Md., Baltimore—Star Garage Co., 1512 Guilford Ave., incorporated; L. L. Hubble, Baltimore; Foster L. Summers, Frederick.

Miss., Meridian—Orr Mfg. Co., incorporated; J. A. and P. O. Orr, manufacture automatic radiator drain and other automobile accessories in temporary plant Seventeenth Ave. and Fourth St.

Mo., Clayton—Clayton General Tire Co. incorporated; B. J. Thatcher, 5150 Maffit St., St. Louis; Clarence L. Wolff, Clayton.

Mo., St. Louis—Rose-Del Garage, Inc., chartered; Albert H. Tucker, 630 Westward St.

Mo., Kansas City—Tilden H. Lishear, 447 E. 55th St., will lease building to be erected N. E. Cor. Manheim Rd. and Troost Ave.

Mo., Slater—Anderson Sales & Service Co., Inc., chartered; W. P. Thomas, Marshall; Raymond H. Anderson, Slater.

Mo., St. Louis—Plaza Garage, incorporated; John A. Hutcheson, 1019 Hampton Park Drive.

N. C., Winston-Salem—Stanley Hudson Co., capital \$100,000, incorporated; S. S. Stanley, 1713 E. Fifth St.

Okl., Laverne—Phillips Petroleum Co., Bartlesville, reported, let contract to McMillen & Shelton, Engrs. for 1 story and basement, brick and rein. conc. filling station.

Tenn., Knoxville—Tennessee Coach Co., 428 State St., erect storage and repair garage on Island Home Blvd.

Tex., Beeville—Roy Vance erecting filling station, also construct additional cottages at tourist camp.

Tex., El Paso—Chas. N. Bassett, State Natl. Bank, erect \$150,000 garage.

Tex., Weslaco—Turner Motor Co., capital \$16,000, incorporated; Fred W. Turner, E. L. McCalip.

Va., Roanoke—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., reported, constructing distributing plant cor. Maryland Ave. and Seventh St., N. E.; 6 storage tanks, total capacity 90,000 gals.; brick warehouse, 40x60 ft. brick garage, 55x60 ft.; construction by owners.

Gas and Oil Enterprises

Ala., Talladega—Alabama Natural Gas Corp., affiliated company of Southern Natural Gas Corp., Watts Bldg., Birmingham, granted permission by Public Service Comsn., Montgomery, to acquire Talladega gas plant and to serve town with natural or artificial gas; continued application of company to construct pipe line of 11 miles from main supply line of Southern Natural Gas Corp. to Talladega. 10-2

Ky., Beaver Dam—Beaver Dam Oil Co., capital \$16,000, incorporated; R. H. Taylor, J. P. Casebier, Elvis DeHart.

Md., Baltimore—Shell Eastern Petroleum Products, Inc., J. R. McGarey, Supt. of Constr. Div., will probably let contract to Empire Construction Co., 31 S. Calvert St., for foundation for tanks Wagner's Point; and to Chicago Bridge & Iron Works Co., Chicago, Ill., for tanks. 2-27

Miss., Hattiesburg—City will probably call election in Dec. to vote on proposed natural gas franchise; W. S. Tatum, Mayor. 10-30

Miss., Jackson—Central Oil and Gas Co., capital \$60,000, incorporated; F. W. Kabbes, 1435 Fourth Ave.

Miss., Jackson—Louisiana Gas & Fuel Co., City Bank Bldg., Shreveport, La., and allied interests, reported, entered Jackson natural gas field; plans underway for purchase of independent companies having production or potential gas acreage in field; probably operate under name of United Gas Distribution Co. or Texas-Louisiana Production Co., offices in Merchants Bank & Trust Co. building.

Missouri—Missouri Valley Pipe Line Co., subsidiary of Moody-Seagraves Corp., Esperson Bldg., Houston, Tex., constructing pipe line bridge across Cimarron river near Gate, Okla., for transportation natural gas; concrete type, 1980 ft. long; contract price, \$33,500, also erecting bridge across Beaver River near Knowles, Okla., conc. trestle type, 1680 ft. long, contract price \$22,150 and across South Canadian River near Borger, Tex., multiple span suspension type, having eight 320 ft. spans with halfspan on each end, total length of bridge 2880 ft.; contract price \$86,000; Frank Parrott, First Natl. Bank Bldg., Dallas, Tex., Contrs.; Matthews & Kenan, Consult. Engrs., Smith-Young Tower, San Antonio, Tex. 11-13

Okl., Buffalo—City, E. F. Camp, Mayor, advise election postponed indefinitely on granting gas franchise. 11-13

Tex., Borger—T. M. Deal Oil and Gas Co., capital \$50,000, incorporated; M. R. Porter, Borger; Nat Foster, Jr.

Tex., Cleveland—Ingram Petroleum Co., capital \$50,000, incorporated; J. R. Ingram, J. H. Holland.

Tex., Fort Worth—City, reported, plans special charter change election to make possible acquisition of properties of Fort Worth Gas Co.; City Council authorized purchase of 1000 tons of 30-in. c. i. pipe for construction of water department feeder line into Polytechnic, from United States Cast Iron Pipe and Foundry Co., Birmingham, Ala.; will let contract soon for 2000 tons of pipe.

Tex., Gainesville—Lone Star Gas Co., 1915 Wood St., Dallas, erecting pipe line bridge across Red River near Gainesville, for transportation of natural gas across bridges and streams; suspension type having main span of 840 ft. and loaded backstay span of 420 ft., total length 1260 ft.; contract price \$52,234; Southwest L. E. Myers Co., Athletic Bldg., Dallas, Contrs.; Matthews & Kenan, Consult. Engrs., Smith-Young Tower, San Antonio.

Texas—West Texas Utilities Co., Abilene, reported, plans construction work to include 3 extensions to Dalhart water distribution system; at Dumas will lay 5400 ft. of 2-in. mains; extensions in Wilbarger county oil field, include 3 mile line to deliver power to Zenith Oil Co., single phase extension to Cosden Oil Co. and lines to serve Eastern Oil Co. and Empire Fuel Co.; distribution systems for electric service will be made and improvements at Dalhart, Rowena, Hawley and Hamlin; repairs to dam at Lake Pauline; substation improvements will be made at Cross Plains and Vernon.

Va., Fredericksburg—Washington Gas Light Co., 411 10th St., N. W., Washington, D. C., reported, negotiating for city owned gas works.

W. Va., Bluefield—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., reported, plans bulk plants at Beckley and Logan, service station at Bluefield Ave. and Mercer St.; in tentative program company, reported, plans erection of 13 bulk plants in West Virginia, at cost of \$3,000,000. 7-3

W. Va., Parkersburg—Standard Oil Co. of New Jersey, 26 Broadway, New York, and Pure Oil Co., Pure Oil Bldg., Chicago, Ill., completing arrangements for operating pipe line and certain producing properties on joint basis; negotiations being completed in connection with Ajax Pipe Line Co., Wilhoit Bldg., Springfield, Mo., pipe line from Glenn pool district in Oklahoma to Wood River, Ill.; transaction includes trading of part of New Jersey company's mid-continent crude production for portion of oil from Van Zandt field in Texas, line now under construction; from Wood River arrangements have been made with Illinois Pipe Line Co. and other carriers to move crude oil to Kentucky, West Virginia and Ohio; also make connection with Standard Oil Co.'s refineries at Parkersburg; Pure Oil Co. will utilize portion of Carter Oil Co.'s production convenient to new Ajax pipe line; Humboldt Pipe Line Co., Humble Bldg., Houston, Tex., will build into Van Zandt field in East Texas. 11-6

Ice and Cold-Storage Plants

Fla., New Port Richey—Florida Power Corp., St. Petersburg, reported, acquired Gulf Utilities Co., distributors of electric power and operators of electric light and ice plant, at Cedar Keys; plan improvements.

Fla., St. Petersburg—Williams-Beers Ice Co., 112 Ninth St., S., and Duncan, Inc., reported, install Diesel engine to operate both plants.

La., Crowley—Louisiana Public Utilities Co., reported, plans \$55,000 ice plant.

Miss., Goodman—A. K. Dexter, Kosciusko, Miss., and A. B. Parker, Anniston, Ala., reported, acquired Goodman Ice Co.

Tex., Rio Hondo—W. A. Velten, Brownsville, low bidder for drive-in ice station for Central Power and Light Co., Frost Natl. Bank Bldg., San Antonio. 11-6

W. Va., Buckhannon—Pure Ice Co., capital \$50,000, incorporated; George R. C. and J. C. Wiles.

W. Va., Kingwood—Kingwood Ice Co., capital \$25,000, incorporated; T. E. and George R. C. Wiles.

Land Development

Ark., St. Joe—J. D. Rainbolt acquired 10 acres land; develop for tourist camp; build boat houses, etc.

Fla., Crestview—E. E. Kelly, Opp, Ala., reported, acquired 1200 acres Okaloosa farm lands; plans improvements.

Fla., Fort Pierce—American Playground, Inc., reported, acquired 8200 acres from Prudential Land Co.; develop recreational center.

Fla., Largo—H. B. McRae, Palmetto, reported, acquired citrus grove on Sarasota St. Fla., St. Petersburg—Florida Farms, Inc., develop tract in Pinellas County.

Ky., Anchorage—Anchorage Realty Co., capital \$20,000, incorporated; E. R. Rittman, E. S. Howard.

Miss., Greenville—Wilfred G. Gehr, 5019 Froret St., New Orleans, La., reported, acquired 700 acres, formerly operated by Swift-water Plantation Co.; will operate and improve drainage, etc.

Mo., St. Louis—Biebel Bros., Inc., capital \$25,000, incorporated; Arthur L. Biebel, 5003 Vernon St.

Mo., Kansas City—1221 Grand Corp., incorporated; Jacob Barzen, 927 Walnut St.

Mo., St. Louis—The Lancashire Co., 913 Title Guaranty Bldg., developer of Leicestershire, develop 26,422 acre subdivision, north side Manchester Rd. at intersection Berry Rd.; install water, electricity, grade streets, construct sidewalks, etc.; will probably build in the spring. 11-13

N. C., Asheville—Midland Realty Co., capital \$50,000, incorporated; Thomas J. McNeil, 22 Coleman Ave.

N. C., Marshall—The Pallisades, Inc., chartered; Guy V. Roberts, Marshall.

Va., Hopewell—T. V. Penzenik, reported, interested in establishment of Russian colony in Prince George County.

Lumber Enterprises

Ark., Buckner—Luther Ellison, Gen. Mgr., South Arkansas Chamber of Commerce, Camden, announces location of W. T. Riggins

Lumber Co. at Buckner; lease having been signed with Cotton Belt Railway Co. for location on their line; mill represents investment of \$25,000; will begin operation Jan. 1; construction work will begin at once.

La., Ravenswood—Turner-Farber-Love Co., Seventh St. and I. C. R. R., Memphis, Tenn., reported, acquired hardwood band mill, rail, road, rail equipment and logging supplies in addition to about 21,000 acres of timber of R. J. Hackney Lumber Co., Bank of Commerce & Trust Co. Bldg., Memphis, Tenn.

Mo., Poplar Bluff—Black River Lumber Co., P. O. Box 467, H. M. Sleeth, Pres., proposes operation of plant daily output 25,000 hardwood lumber. See Want Section—Machinery and Supplies.

Mo., Stotts City—Shirley D. Mining Co., Fred A. Carmody, Atlasta Place, Joplin, developing 104 acres; concentrates about 40 tons; install \$50,000 crushing plant. See Want Section—Machinery and Supplies. 11-13

Mo., St. Louis—Sutterfield Tie & Lumber Co., capital \$20,000, incorporated; George Sutterfield, Bunker; William Monroe, Ellington.

N. C., High Point—B. & R. Lumber Co., capital \$50,000, incorporated; R. C. Royal, E. M. Brown.

Tenn., Memphis—T. E. Sledge, Bank of Commerce and Trust Bldg., applied for charter for T. E. Sledge Lumber Co., with capital of \$20,000; company has contracted for purchase of hardwood band mills in Mississippi.

Tex., San Antonio—Stout Lumber Co., Inc., capital \$20,000, incorporated; F. D. Stout, 400 E. Myrtle St.

Mining

Ky., Bulan—Indian Head Mining Co., capital \$15,000, incorporated; Wm. and Robt. Heath.

Miscellaneous Construction

D. C., Washington—David Lynn, Archt. of Capitol, has low bid from George A. Fuller Co., Munsey Bldg., at \$189,000, for terraces, balustrades and approaches to Senate office bldg.

Fla., Fort Lauderdale—Broward County Port Authority, Fort Lauderdale, let contract to John Olsson, 1208 S. W. Second St., Fort Lauderdale, for steel framework of initial warehouse unit; 75x120 ft.; soon let contracts for roof and sides; Arthur N. Sollee, Res. Engr. 10-30

La., Natchitoches—Bureau of Fisheries, Washington, D. C., construct \$50,000 new hatchery on Cane River Lake near here.

La., New Orleans—Bd. of Comms. of Port of New Orleans, New Orleans Court Bldg., has low bid from B. N. Davis, 1006 Tchoupitoulas St., at \$50,546, for constructing conc. wharf dock and incidental work at Mandeville St. wharf. 10-2

Louisiana—U. S. Engr. Office, P. O. Box 667, Vicksburg, Miss., opens bids Nov. 25 for constructing approx. 1,329,000 cu. yd. earthwork, west bank of Mississippi River, Subproject Item 41, 594-R. mi. below Cairo, new levee, 22 and 25 ft. average height.

Md., Baltimore—Canton R. R. Co., W. B. Brooks, Pres., South and Water St., has foundation under construction for \$300,000 pier, 4209 Newgate Ave., Canton, to be occupied by Baltimore Mail Steamship Co., Donald Symington, Pres., Baltimore Trust Bldg.; 2 story, 920x90 ft., steel frame covered with corrugated metal, brick front; install passenger elevator, 2 freight elevators and 2 cargo masts; Sanford & Brooks Co., South and Water St., will act as engineers and have charge of construction; owner will purchase materials. (See Miscellaneous Enterprises, 7-17)

Mo., Osage City—U. S. Engr. Office, Postal Telegraph Bldg., Kansas City, has low bid from Bilhorn, Bowers & Peters, Inc., Ry. Exch. Bldg., St. Louis, at \$190,951 for 8270 lin. ft. standard pile clump dikes, 3900 lin. ft. standard revetment and 16,280 lin. ft. levee work, Missouri River, Rising Creek Bend and Cote Sane Dessein Reach. 10-16

Okla., McAlester—G. H. Newton has preliminary plans for \$25,000 swimming pool.

W. Va., Huntington—Fill—See Bridges, Culverts and Viaducts.

Miscellaneous Enterprises

Ala., Mobile—See N. C., Canton.

Ala., Mobile—Jett-Quill Construction Co., (Gen. Contr.), Staples-Powell Bldg., dissolved partnership, J. J. Quill retiring from firm; business to continue as J. E. Jett Construction Co., D. E. Jett, Pres.

Ark., Mena—Otto Lehrack, Jr., 5100 State Line St., Kansas City, Mo., directing con-

struction of plant in Health Valley for manufacturing slate products.

Fla., Lake City—J. L. Gray, reported, develop 300 acres in tung oil; initial planting 90 acres.

Ga., Augusta—See S. C., Spartanburg.

Ga., Athens—W. H. White, Montgomery, Ala., and Atlanta, reported, plans forming company, operate packing plant.

Ga., Cuthbert—John T. Ragan & Co., Vidalia, reported, low bidder for Bottling plant for Coca Cola Bottling Co.; 1 and 2-story and basement; rein. conc.; brick and tile walls; Dennis & Dennis, Archts., 556 Mulberry St., Macon.

Ga., Swainsboro—Alabama Coca Cola Bottling Co., Jos. Eros, 1010 Gurnel St., Anniston, Ala., receives bids Dec. 1 at office of Pringle & Smith, Archts., Norris Bldg., Atlanta, for bottling plant; elevator to be let under separate contract; 2 story and basement; face brick and Indiana limestone; cement and tile floors; wire partition and gates; following contractors estimating: Gilbert Beers, Bona Allen Bldg., and J. E. Lucas, 74 Bass St., both Atlanta; Claussen-Lawrence Construction Co., 1394 Gwinnett St., Augusta; J. D. Hancock, 1220 E. 31st St., Savannah; John T. Ragan, Vidalia; J. O. Sutton, Swainsboro. 10-30

Ga., Vidalia—J. E. Thompson developing saw mill, amusement resort, etc. on old Villalia Soperton Rd.; will construct bath houses, gasoline station.

La., Houma—William Wallace, Pere Marquette Bldg., New Orleans, reported, has contract for construction of 2 story, frame laboratory on Southdown Plantation for American Sugar Cane League of U. S. A., Reg. Dykers, V. P., 6114 S. Clairborne St., New Orleans. 11-6

La., New Orleans—J. V. and R. T. Burkes, Inc., American Bank Bldg., reported, has contract for foundation for brick, fireproof warehouse, Poydras St., for Karl Hansen Co., Inc., 121 N. Robertson St. 9-18

Md., Baltimore—William E. Gambrill & Co., Inc., 217 East St., incorporated; Medford G. Talbott, Gordan Gambrill; builders.

Md., Baltimore—See Miscellaneous Construction.

Md., Baltimore—Koontz Creamery Corp., Westminster, acquired site west side Reisters-town Rd. between Mortimer and Academy Ave.; construct creamery.

Md., Hagerstown—Outdoor Advertisers, Inc., chartered; Fred C. Wright, First Natl. Bank Bldg.

Miss., Booneville—H. D. Dillon, of Booneville Branch of Tupelo Garment Co., Tupelo, plans installing additional equipment.

Miss., Jackson—Atlas Broom Co., 2401 Onzaga St., New Orleans, La., reported, establish plant.

Miss., Jackson—See Tenn., Memphis.

Mo., Kansas City—Ralph Ettlinger Casing Co., 1919 Wyandotte St., installing additional machinery in building 2722 Cherry St., for manufacture of protective containers for meat.

Mo., Kansas City—Kansas City Lithographing Co., 1127 Monroe St., chartered; John C. Kiefer, Clarence C. Thompson.

Mo., Kansas City—Technical Lubricants Co., incorporated; Albert Anderson, 330 Spruce St.

Mo., St. Charles—No-Wheelz Corp., incorporated; Wm. Brondel, Centertown; Mike Clatta, St. Charles; manufacture chemicals.

Mo., St. Louis—Bude Brothers, Inc., chartered; George and James K. Bude, both 666 LeMay Ferry Road; cleaners and dyers.

Mo., St. Louis—C. Garrett Co., Inc., capital \$50,000, incorporated; Edward M. Ruddy, Arcade Bldg.; builders and contractors.

Mo., St. Louis—Building Industries Corp., incorporated; Edward C. Schneider, 317 N. 11th St.

Mo., St. Louis—Park Transportation Co., incorporated; J. W. Bresler, 2249 Klemm St.

N. C., Canton—Champion Coated Paper Corp., Alexander Thompson, Jr., Hamilton, O., reported, plans expending \$1,000,000 for factory improvements at Canton, N. C., and Hamilton, O.; also, reported, expend \$2,000,000 for paper plant at Mobile, Ala., install in Mobile plant 4 book paper making machines, 232 in-wide; and four paper making machines 900 ft. long; will manufacture uncoated product; plans improvements to 160,000 acres of Western North Carolina and Southeastern Tennessee timber tracts.

N. C., Charlotte—The Kalbfleisch Corp., 200 Fifth Ave., New York, (subsidiary of American Cyanamid Co.) announced purchase of assets and business of A. Klipstein & Co., 644 Greenwich St., New York, and its subsidiary companies having chemical manufacturing plant at Charlotte; distribution of dyestuffs will probably be conducted under

direction of Calco Chemical Co., Inc., Bound Brook, N. J.; business of A. Klipstein & Co., will continue to be carried on by separate entity; office of both companies after Jan. 1 will be 1931 Fifth Ave., New York City. 11-13

N. C., High Point—High Point Pepsi-Cola Co., Inc., capital \$100,000, incorporated; M. C. Rowland, J. L. White.

N. C., Salisbury—Carolina Rubber Hose Co., capital \$50,000, incorporated; Harry R. Ferguson, Miles J. Smith.

Okla., Oklahoma City—Sherman Machine & Iron Works, 18-36 E. Main St., plans installing small galvanizing plant in connection with machine and iron works. See Want Section-Machinery and Supplies.

Okla., Tulsa—Electric Supply Co., 815 E. Third St., has contract for installation of traffic signal lights, manufactured by Eagle Signal Sales Corp., subsidiary of Gamewell Co., Newton Upper Falls, Mass. 11-13

Okla., Tulsa—Nicholson Clock Co., 3109 W. Fifth St., reported, let contract to J. R. Forner Construction Co., Ritz Bldg., for 1 story, 40x95 ft., building; cost \$30,000.

S. C., Spartanburg—International Paper Co., 100 E. 42nd St., New York, reported, granted permission by Judge Wm. H. Barrett, Augusta, Ga., to acquire Augusta (Ga.) Chronicle, Columbia (S. C.) Record, Spartanburg (S. C.) Herald and Spartanburg Journal.

Tenn., Nashville—Swift & Co., Union Stockyards, Chicago, Ill., reported, acquired plants of Neuhoof Packing Co., 1308 Adams St., and Nashville Cold Storage Co., both Nashville, and of White Provision Co., Howell Mill Rd., Atlanta, Ga.

Tex., Brownsville—Southern Potato Products Co., reported, soon let contract for potato canning plant.

Tex., Dallas—Queen Cleaning Co., capital \$40,000, incorporated; Anthony E. Wilson, 716 W. Seventh St.

Tex., Fort Worth—Texas Calcium Carbonate Co., incorporated; A. T. McKean, Littlefield Bldg., Austin.

Tex., Fort Worth—Electrical Engineering & Estimating Co. incorporated; Eugene Ashe, 505 Jones St.

Tex., Fort Worth—Sunshine Products Co., incorporated; R. H. Mason, 2020 Hawthorne St.; food products.

Tex., Houston—Saline Chemical Co., incorporated; H. B. Anderson, 1814 Stanford St., reported, construct \$1,000,000 plant at Pierce Junction for development of salt resources and conversion into chemicals.

Tex., Houston—McComb Gravel Co., capital \$20,000, incorporated; D. A. Gorman, 1319 Crawford St.

Tex., Galveston—J. Levy & Brothers, Inc., capital \$25,000, incorporated; J. Levy, 2128 J St., undertakers.

Tex., San Benito—Etchison Produce Co., 595 Sam Houston Blvd., construct 1 story, 48 x 200 ft. packing plant, including cold storage room.

Tex., Three Rivers—Three Rivers Glass Co., increased capital \$250,000 to \$600,000.

Va., Norfolk—Chesapeake Ferry Co., John H. Rodgers, Pres., reported, acquired controlling interest in Peninsular Ferry Corp., 129 Boush St., planning operation of ferry service between Norfolk and Cape Charles; ferry line will operate from terminal of Chesapeake Co. at Pine Beach; marine operation under direction of Russell S. Barrett; erection of terminal for Peninsular line at Cape Charles begun; dock to be located 6 blocks north of Pennsylvania Railroad terminal at Cape Charles will be of creosoted timber, 250 ft. by 125 ft. (See Miscellaneous Construction, 10-13.)

Va., Richmond—Chevrolet Motor Co., 3044 Grand Blvd., Detroit, Mich., reported, leased building and completing plans for truck body assembling plant; plans establishing several assembly plants to which material will be shipped ready to be put together and mounted on chassis; probably erect permanent plants later.

Motor Bus Lines and Terminals

Arkansas—Thompson Bus Line, Wilson, reported, granted permit for bus line from Osceola to Marked Tree and from Marked Tree to Newport.

Ark., Little Rock—Arkansas Railroad Comsn., Little Rock, granted permit to Southwestern Transportation Co., Rector Bldg., to operate motor vehicle lines over several roads in northeast Arkansas and Southeast Missouri over Highway No. 90 from Rector to St. Francis River over Highway No. 84 to Kennett, Mo.

Tenn., Jackson—Smith Motor Coach Co., F. Smith, Pres., 144 N. Front St., reported, has plans by Jones & Furbringer, Porter Bldg., for maintenance garage; cost \$50,000; remodeling passenger terminals, \$10,000.

Railways

Texas—Atchison, Topeka & Santa Fe Ry. Co., M. J. Collins, Gen. Pur. Agt., Chicago, Ill., ordered 10 horse express cars from Pullman Car & Mfg. Co., 79 E. Adams St., Chicago, Ill.

Va., Norfolk—Virginian Ry. Co., D. C. King Pur. Agt., ordered 600 55-ton hopper cars from Virginia Bridge & Iron Co., Roanoke; some reclaimed material to be used.

Va., Hopewell—Southampton and Northern R. R., chartered; Clement S. Ucker, Pres., Alfred Tyler, Treas., both Baltimore Trust Bldg., Baltimore, Md.; J. A. Pretlow, V. Pres., Franklin; G. Hubard Massey, Consol. Engr., Norfolk; construct 56-mi. line, Franklin to Hopewell.

West Virginia—Baltimore & Ohio R. R. Co., H. A. Lane, Ch. Engr., Baltimore, install automatic signals, Glenwood Junction to Gilkeson and insert centralized train control, Gilkeson to Wheeling, 42 mi., costing about \$680,000, as second half of improvements calling for total expenditure of \$1,185,000; work not yet started.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Ala., Birmingham—City Comsn. authorized building paved thoroughfare connecting East Lake and Gate City along Madrid Ave.; \$40,000.

Ark., Little Rock—Improvement Dist. Committee of City Council considering forming district to widen Spring St.

Fla., Ocala—City, H. C. Sistrunk, will call for bids for paving 2 blocks, extension of Main St.

Ga., Macon—Bibb County Commrs., T. W. Clifton, Clk., advises paving, Forsyth road to Bellevue School, probably be done in spring, 1931; under supervision of County Engr. and will not be let through bidding. 11-13

Georgia—State Highway Bd., J. W. Barnett, Chmn., Atlanta, opens bids Nov. 26 for 9,600 mi. paving, Augusta-Waynesboro-McBean Route road, Augusta to Burke County line, Richmond County, Proj. S-10-14.

Georgia—State Highway Bd., J. W. Barnett, Chmn., Atlanta, opens bids Nov. 26 for 11 roads and 17 bridges:

In Paulding County—Bridge over S. A. L. Ry., Dallas-Cedartown road, F. A. P. 424-C, alternate 1, 11,000 lb. rein. steel, 45,400 lb. struc. steel, alternate 2, 1500 lb. rein. steel, 420 f. b. m. untreated timber, 22,630 f. b. m. treated timber; Telfair County—9.10 mi. paving, Eastman-Lumber City road, Dodge-Telfair County line to north end of F. A. P. 149, F. A. P. 265-A reopened and 265-B, 78,384 cu. yd. excavation, 109,563 sq. yd. limerock base, 32,870 gal. tar prime coat, 54,800 gal. asphalt, 11,531 lb. rein. steel; Mitchell County—9.05 mi. graded road and bridge, Camilla-Newton road, Newton to Camilla, F. A. P. 467, Cont. 1, 88,631 cu. yd. excavation, 3761 lb. rein. steel, cont. 2, 31,800 lb. rein. steel, 67,900 lb. struc. steel, 15,500 f. b. m. treated timber, 1600 lin. ft. treated piles.

In Atkinson County—460 mi. top soil, Alapaha-Pearson road, .46 mi. east of Berrien County line to Berrien County line, F. A. P. 410-E, 51,012 cu. yd. excavation; Brantley County—12.5 mi. paving, widening bridge and surfacing 4 bridges, Waycross-Brunswick road, Nahunta to Glynn County line, F. A. P. 388-B, 388-C reopened and 388 E&F, 49,343 cu. yd. excavation, 13,561 lb. rein. steel, 158,308 sq. yd. limerock base, 49,000 gal. tar prime coat, 65,500 gal. asphalt, 2980 tons extra limerock, 15,400 lb. struc. steel, 1100 f. b. m. treated timber; Oglethorpe-Wilkes Counties—3 bridges, Lexington-Washington road, Lexington to Wilkes County line, F. A. P. 468-A, 85,300 lb. rein. steel, 190,300 lb. struc. steel, 26,920 f. b. m. treated timber, 6285 lin. ft. treated piles; Madison-Franklin County—1 mi. top soil, Danielsville-Royston road, 6 mi. south of Royston to 7 mi. south of Royston, F. A. P. 402-E, 33,583; 2500 sq. yd. rip rap.

In Richmond County—16.3 mi. paving, 3 bridges, F. A. P. 472-A, 140,737 cu. yd. excavation, 190,692 cu. yd. conc. paving, 167,365 lin. ft. raised edge curb, 12,300 lb. rein.

steel, 23,600 lb. struc. steel, 2900 f. b. m. treated timber, 840 lin. ft. treated piles; Glynn County—12.8 mi. paving, Waycross-Brunswick road, Brantley County line to Coastal Highway, F. A. P. 388-H, 43,196 cu. yd. excavation, 7942 rein. steel, 1180 sq. yd. rip rap, 158,387 sq. yd. limerock base, 47,517 gal. tar prime coat, 79,194 gal. asphalt, 3576 cu. yd. slag aggregate, 2000 tons extra limerock; Burke County—9.372 mi. paving, 2 bridges, Waynesboro-Augusta road, Waynesboro to Richmond County line, F. A. P. 472-B, Cont. 1, 96,282 cu. yd. excavation, 109,261 sq. yd. conc. paving, 20,908 lin. ft. raised edge curb, 44,476 lb. rein. steel, 52,332 lb. struc. steel, 4155 f. b. m. treated timber, 1440 lin. ft. treated piles.

In DeKalb County—10.73 mi. graded road, bridge, Atlanta-Covington road, near Avondale to Lithonia, F. A. P. 27 reopened and 247B, 128,610 cu. yd. excavation, 13,287 lb. rein. steel, 13,000 lb. rein. steel in bridge; Grady County—7.882 mi. paving, 3 bridges, Bainbridge-Cairo road, near Whigham to Cairo, F. A. P. 325A and 158 reopened, 3725 lb. rein. steel, 100,357 sq. yd. limerock base, 30,107 gal. tar prime coat, 50,179 gal. asphalt, 2281 cu. yd. aggregate, 19,800 lb. rein. steel in bridges; Telfair County—12.435 mi. paving, McRae-Lumber City road, south end of F. A. P. 265 to Lumber City, F. A. P. 149 reopened and 210-B, 160,859 cu. yd. excavation, 34,948 lb. rein. steel, 153,200 sq. yd. limerock base, 46,000 gal. tar prime coat, 75,300 gal. asphalt, 3500 cu. yd. slag aggregate; Lamar County—widening bridge and culvert, Griffin-Barnesville road, S. A. P. 1-D, 15,100 lb. rein. steel. 10-13

Ga., Columbus—City has bid of \$18,970 (only bid), from Independent Paving Co., 3828 First Ave., S., Birmingham, for paving 12th Ave., Jordan City to Hamilton road. 10-30

La., Tallulah—Madison Parish Police Jury, P. O. Benjamin, Sec.-Engr., in charge, have plans ready for bids about Nov. 29 for 11 mi. draining, graveling, Trinidad-King-Afton road. Miss., Holly Springs—Marshall County expend \$35,000 for improving road. See Financial News Columns.

La., Tallulah—City, Mayor and Bd. of Aldermen, opens bids Dec. 9 for Portland cement conc. paving on several streets; J. M. Fourmy, Engr.

Maryland—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids Dec. 2 for 2.4 mi. conc., section of Parkhead relocation of National Pike, Licking Creek to Millstone, F. A. P. 197B-Re, Cont. W-58-63.

Miss., Walthal—Highway Commrs. of Mantee and Dancy Separate Road Dist. of Webster County, Office of Chancery Clk., opens bids Dec. 1 for 2 roads: Graveling, Cumberland and Hohenlinden road, 1800 cu. yd. gravel; 3.55 mi. building new road, 30,300 cu. yd. excavation, Proj. 19.

Miss., Fayette—Jefferson County Supvrs., S. Gillis, Clk., opens bids Dec. 1 for maintaining roads of Dist. 1 for 2 years, from Jan. 1, 1931.

Miss., Grenada—City Council rejected bids for paving certain streets and voted to re-advertise and let contract at next regular meeting in December. 10-23

Oklahoma—State Highway Comsn., Lew Wentz, Chmn., Oklahoma City, opens bids Nov. 25 for 3 roads: Greer County—13.1 mi. grading, draining, Highway 9, Mangum to Harmon; Jefferson County—24.1 mi. improving U. S. 70, Waurika east to Carter County line; Comanche County—13.6 mi. extension of State Highway 36, Tillman County line through Chattanooga, Faxon and Holiday.

Oklahoma—State Highway Comsn., Lew Wentz, Chmn., Oklahoma City, secured 34 ft. additional right of way, Waynoka to Alva, for widening to standard of 100 ft.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, opens bids about Nov. 29 or Dec. 1 for 4 roads and 2 bridge projects: Brazos County—5.9 mi. grading, draining, Highway 21, Kurten to Navosta River, F. A. 490-D, Unit 1; Harris County—7.7 mi. grading draining, Highway 73, Campbell road to Addicks, S. A. 800-B, Unit 1; Leon County—3000 ft. bridges over Koechi and Buffalo Creeks, overall length, 9630 ft., steel, conc. and timber pile trestle, \$160,000; Hall County—5.6 mi. grading, draining, Highway 72, Motley County line to Turkey, F. A. 530-C, Unit 1; Hill County—136.5-ft. steel and conc. bridge over White Rock Creek, 24-ft. roadway, \$15,000; Brazos County—10 mi. grading, draining, Highway 21, Bryan to Kurten, F. A. 490-E, Unit 1.

Tex., Austin—Travis County, Geo. S. Mathews, Judge, has low bids for 6 roads: 1.78 mi. graveling, Hodde Lane Road, W. R. Canyon, 1412 S. First St., \$3471; 2.41 mi. graveling Plüger-Cameron road, Fred P. Holt, Marble Falls, \$12,645; 5.4 mi. gravel-

ing, Sweden-Lund road, Fred P. Holt, \$30,126; 1.72 mi. graveling, Manda-Kimbrow road, \$10,012; 6.84 mi. graveling, Cameron road, J. W. Gwinn, Comer Bldg., Birmingham, Ala., \$16,046; 1.55 mi. graveling, Lund North road, Fred P. Holt, \$10,648; O. Leonard, County Engr. 10-30

Tex., Austin—City, Adam R. Johnson, Mgr., completing plans for 2-in. Warrenite bitulithic on 5-in. conc. base, 30-ft. paving, W. 29th St., \$8500; 2-in. Warrenite bitulithic on 5-in. conc. base, East Ave.; H. R. F. Heland, Conslt. Engr.; L. M. Chokla, Paving Engr.

Tex., Hearne—City Council ordered continuation of paving project to include Davis Street from intersection with Cedar St. to Live Oak, \$10,604.

Tex., Houston—City, W. E. Monteith, Mayor, has low bids for street improvements: Paving Jefferson Ave. between Louisiana and Crawford Sts., Brown & Root, 4300 Calhoun St., \$43,422; Group S, including graveling 13 streets, Griswold Bros., 3840 Polk St., \$19,102, for mud shell base and pea gravel top; road gravel, Charles A. Wood, 1436 Brevard St., \$28,028; City Council passed ordinances ordering paving N. Main and Brazos Sts.

Tex., Houston—J. M. Nagle, City Engr., recommended that 14 streets be gravelled, using mud shell base and pea gravel top, or regular road gravel, costing \$14,844 and \$25,221, respectively.

Tex., Houston—City, W. E. Monteith, Mayor, plans opening Koehler St. 1000 ft.; immediately acquire right of way; plans graveling Brewster St.

Tex., La Feria—City expend \$14,500 for street paving. See Financial News Columns.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, opens bids Nov. 29 for 6 roads and bridge: Gillespie County—12.855 mi. grading, draining, Highway 20-A, Kimble County line to beginning S. 908-C, S. A. 908-B, Unit 1; Kaufman County—grading, draining, Highway 15 through Forney, F. A. 526-A, Unit 1; Wise County—4.2 mi. grading, draining, Highway 114, Denton County line to connect Highway 2 at Rhome, S. A. 839-F, Unit 1; 8 mi. grading, draining, Highway 2, relocation near Rhome, S. A. 52 reopened; McLennan County—8.0 mi. grading, draining, Highway 7, intersection with Highway 31 to Limestone County line, F. A. 617-A, Unit 1, 103,938 cu. yd. excavation, 16,133 cu. yd. borrow, 1832 yd. A conc., 250,980 lb. rein. steel, 1380 lin. ft. precast conc. piling; Fisher County—253 mi. rein. conc. bridge over Clear Fork of Brazos River, Highway 83, 10 26 ft. 6-in. girder spans, 22-ft. roadway; Wharton County—15 mi. grading, draining, Highway 71, El Campo to Colorado County line, S. A. 945-A.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, opens bids Dec. 1 for 5 roads: Henderson County—7.963 mi. grading, draining, Highway 40, Athens to 3 mi. west of La Rue, F. A. 556-G, Unit 1; Throckmorton County—14.511 mi. triple asphalt surface treatment on 8-in. compacted crushed gravel base course, Throckmorton to Young County line, S. A. 481-A, Unit 2; Van Zandt County—7.3 mi. grading, draining, Highway 15, Smith County line to Grand Saline, F. A. 363-D, Unit 1; Runnels-Coleman Counties—14.7 mi. grading, draining, Highway 23, Ballinger to Talpa, F. A. 600-B and C, Unit 1; Dewitt County—6.6 mi. bituminous surfacing on caliche and stone base, 11-in. thickness, Highway 72, Smith Creek to Karnes County line, S. A. 735-C, Unit 2.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., opens bids about Nov. 29 or Dec. 1 for 13 roads: Motley County—12.3 mi. grading, draining, Highway 18, Dickens County line to Matador, F. A. 446-B, Unit 1; Wheeler County—16.4 mi. grading, draining, Highway 75, Gray County line to Shamrock, F. A. 547-D, Unit 1; McLennan County—9.4 mi. grading, draining, Highway 2, Texas Electric Ry. to Hill County line, F. A. 139-B, Unit 1; Tom Green County—9.8 mi. bituminous surface course on crushed stone base, Highway 9, Carlsbad to Coke County line, F. A. 412-B, Unit 2; Jefferson County—4.6 mi. grading, draining, conc. paving, Highway 3, Beaumont to Amelia, F. A. 56 reopened; Jack County—11.04 mi. grading, draining, Highway 334, Wise County line to intersect Highway 25, S. A. 859-H, Unit 1; Lubbock County—17.7 mi. grading, draining, Highway 7, Lubbock to Hockley County line, F. A. 503-A, Unit 1; McLennan County—8.03 mi. grading, draining, Highway 2, Waco north to Texas Electric Ry., F. A. 139-A, Unit 1; Live Oak County—12.50 mi. grading, draining, Highway 145, point 6 mi. south of George West to Jim Wells County line, S. A. 931-D, Unit 1; Dallas County—8.6 mi. grading, draining, Highway 15-A, S. A. 946-A to Dallas City limits, S. A. 946-B, Unit 1; Fayette County—9.735 mi. surfacing with double bituminous surface treatment on

32½-in. compacted gravel and limestone surface course on 6½-in. compacted gravel base course, Highway 72, F. A. 28 to intersection of Highway 3, Schulenburg, F. A. 574, Unit 2; Brazoria County—8.5 mi. grading, draining, Highway 36, West Columbia to Brazoria, S. A. 889-D, Unit 1; Morris County—10.4 mi. grading, draining, Highway 11, north from Omaha, S. A. 922-C and E.

Tex., San Antonio—Bexar County, W. S. Goodman, County Engr., has low bids for 2 roads: 4.117 mi. asphalt topping and asphalt patching, Palo Alto road, Alamo Paving Co., 321 Dawson St., \$1964 for ½ in. and \$1388 for ¼ in.; 4.17 mi. asphalt topping and asphalt patching, Palo Alto road, same firm, \$10,747. 10-23

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, completing plans for 22.3 mi. grading, draining, Highway 97, E. Line Road Dist. 2 to McMullen County line, Atascosa County, S. A. 628-C.

Tex., Waco — McLennan County, R. B. Stanford, Judge, Manton Hannah, County Engr., opened bids Nov. 21 for 10 roads: 8.9 mi. Axtell Route 1, Sec. D and Axtell Route 2, Sec. 4, 100,000 cu. yd. excavation; 7.5 mi. West Route 2, Sec. 4 and West Route 3, 60,040 cu. yd. excavation; 10 mi. West Route 1, 70,696 cu. yd. excavation; 13.2 mi. Ross Route 1, 93,350 cu. yd. excavation; 7.5 mi. Moody Route 4, Sec. D, 53,040 cu. yd. excavation; 10.7 mi. Moody Route 3, Sec. D and Moody Route 3, Sec. B, 75,670 cu. yd. excavation; 11 mi. McGregor Route 5 and Valley Mills Route 2, 77,792 cu. yd. excavation; 13.3 mi. Mart Route 3, Sec. D, Morte Route 4, Riesel Route 1 and Waco Route 8, 89,789 cu. yd. excavation; 10.6 mi. Lorena Route 2, Sec. 2, Lorena Route 3, 74,964 cu. yd. excavation; 1 mi. Lorena Route 1, Sec. B, McGregor Route 3, Sec. C, 69,306 cu. yd. excavation.

W. Va., Huntington—City opens bids Nov. 24 for grading portion of new route of Highway No. 60, western end of city, 2300 ft., \$13,000.

W. Va., Wheeling—City plans curbing Woodward Ave.

Contracts Awarded

Alabama—State Highway Comsn., Woolsev Fennell, Montgomery, let contract to H. N. Donahoo, 510 N. 21st St., Birmingham, for 11½ mi. grading, draining, surfacing, Hackleburg to Hamilton.

Ark., Magnolia—C. J. Gantt has contract for 7 mi. grading, Highway 2, Waldo to Dorchester bridge.

Fla., Jacksonville—Duval County Comms. let contract to Asfalterra Co., at \$30,613, for paving portions of Chaseville, Gilmore and Lake Shore roads. 11-13

Florida—State Road Dept., Robert W. Bently, Chmn., Tallahassee, let contracts for 4 roads and bridge: Brevard County—bridge over Cane Creek, Road 4, F. A. 71, Okeechobee Construction Co., \$67,703; Polk County—9.92 mi. plain cement conc., Road 17, F. A. 73-D, John J. Quinn Co., Inc., 116 N. E. 29th St., Miami, \$263,164; St. Johns County—6 mi. spuds, Road 47 toward Tocoi, Proj. 727, L. M. Gray, Gainesville, Fla.; Duval County—4.72 mi. conc. header curb and cold mix asphaltic surfacing on present brick road, Road 4, Proj. 883, John E. Ballenger Construction Co., Lakeland, \$99,011; 4.86 mi. conc. header curb and cold mix asphaltic surface on present brick road, Road 4, Proj. 885, Robt. G. Lassiter Co., Barnett Bldg., Jacksonville, and S. W. 27th Ave., Miami, \$100,536. 11-6

Ky., Lexington—City let contracts to Louis des Cognets & Co., 413 E. Main St., and Carey-Reed Co., Guaranty Bank Bldg., for street, sidewalk and sewer construction in north and south ends of city, at \$30,000 to \$40,000.

Ky., Louisville—City, A. A. Will, Dir., Dept. of Public Works, let contracts for asphalt paving 5 streets: Henry Bickel Co., Inc., 435 Garden St., \$13,165; Louisville Asphalt Co., Floyd and Lee St., \$8946; Andrews-Collins Asphalt Co., 1350 S. 13th St.; Geo. M. Eady Co., 340 Byrne St., \$6947; F. G. Breslin, 32nd and Market St., \$9097; A. A. Kreiger, City Engr. 11-6

Louisiana—State Highway Comsn., O. K. Allen, Chmn., Baton Rouge, let contract to Ellis & Lewis, Surety Bldg., Muskogee, Okla., for grading, graveling, Logansport-Hunter Highway, De Soto Parish. 11-6

N. C., Durham — City, A. W. Kueffner, Engr., building 2 mi., 5-ft. conc. sidewalks with city forces. 11-13

Tex., Amarillo — City let contracts for streets: curb and gutter, widening several streets and avenues, Country Club district, Gober & Thompson, 316½ Polk St.; widening N. Fillmore St., Willmering & Mullen, 96 P., \$13,626.

Tex., Houston—City, W. E. Monteith, Mayor, let contract to Uvalde Rock Asphalt Co., 820 Dowling St., for paving Wayside Drive between Harrisburg and Navigation Bldgs.

Tex., Corsicana—Navarro County Comms. Court let contract to F. P. McElwraith Construction Co., for 2 conc. lateral roads, Consolidated Road Dist. No. 1, \$16,950 each.

Va., Norfolk—City, Walter H. Taylor, III, Dir. of Public Works, pave approaches to Granby St. bridge with own forces.

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported

Ala., Birmingham—Jefferson County, L. H. Salter, Sanitary Engr., Martin Bldg., plans 5 miles sewer and disposal plant; cost \$450,000. 11-13

Ala., Mobile—City voted \$250,000 sanitary sewer extension bonds, \$200,000 water works extension bonds and \$75,000 airport improvement bonds. 10-30

Ark., Dumas—Sewer Improvement Dist. No. 1, Frank R. Allen, Engr., plans \$45,000 sanitary sewer system.

D. C., Washington—Dist. Comms. receive bids Dec. 19 for 4435 ft. of sewer. See Want Section—Bids Asked.

D. C., Washington — Dist. Comms. plan storm water sewers Quincy St., N. E., between Twentieth and Twenty-second Sts. and in Perry St., N. E., between Twenty-second and Twenty-fourth Sts.

D. C., Washington—W. A. Pate, Jr., 1048 Twenty-ninth St., N. W., reported, has contract for Rhode Island Ave. replacement sewer between Fourteenth and Fifteenth Sts. and for construction of Grant St. sewer between Forty-second and Forty-fourth Sts.; Peter d'Adamo Construction Co., Marine Bank Bldg., Baltimore, Md., at \$85,980 for Blagden Ave. stormwater sewer; Warren F. Brenzler Co., 101 New York Ave., N. W., for replacement sewer on M St. between 15th and 16th Sts. and for 13th St. and Riggs Ave. replacement sewers; Corson & Gruman Co., 33rd and K Sts., N. W., for service sewer Linwood Place and 56th St., N. E.; M. Cain Co., Inc., 13 Sixth St., N. W., for replacement sewer Seventh and G Sts., S. W.; J. B. McCrary Co., Citizens and Southern Bank Bldg., Atlanta, Ga., for combined system sewer in Thirteenth St., N. W. 10-31

Ky., Lexington—See Roads, Streets and Paving.

Ky., Louisville—George M. Eady Construction Co., 340 Byrne St., reported, has contract for Goss Ave. sewer project; plans call for 2000 ft. barrel sewer extending from Beargrass Creek at Eastern Parkway, southeast to Poplar Level Rd.; estimated cost \$34,000. 11-6

Ky., Winchester—City voted sewer bonds. See Financial News Columns. 10-16

La., Baton Rouge—Comsn. Council, L. J. Voorhies, Conslt. Engr., receives bids Dec. 16 for sanitary sewers. See Want Section—Bids Asked.

La., New Orleans—Sewerage and Water Bd. receives bids Dec. 30 for extension Drainage Pumping Sta. No. 7, etc. See Want Section—Bids Asked.

Md., Catonsville, Baltimore—County Comms., Baltimore County receives bids Dec. 1 for sewers and appurtenances in West Catonsville. See Want Section—Bids Asked. 9-18

Md., Baltimore—Angelozzi Constr. Co., Everall and Mayberry Ave., low bidder at \$77,047 for Storm Water Contr. No. 158. 11-6

Md., Hagerstown—City, Ruben Musey, Mayor, plans constructing 12 miles North End sewer; cost about \$350,000.

Okla., Oklahoma City—City, reported, plans voting on bonds for sewers; Geo. Brown, City Engr. See Financial News Columns. 9-18

S. C., Spartanburg—Metropolitan Sub-District "B" receives bids Dec. 16 for water works and sewer systems. See Want Section—Bids Asked.

Tex., Houston—Elder Construction Co., 4714 Jack St., low bidder at \$12,997 for sub-drainage along S. McGregor Way, between Southland Terrace and Scott St.

Tex., Houston—City receives bids Nov. 26 for bucket elevator and small screw conveyor in connection with screening equipment at North Side sewage treatment plant. See Want Section—Bids Asked.

Tex., Irving—City voted sewer bonds. See Financial News Column. 10-9

Tex., Jasper—A. C. Jones, Oberlin, La., reported, has contract for storm sewer system; cost \$19,822. 11-6

Tex., LaFeria—See Water Works.

Tex., Plainview—Jordan-Hall Construction Co. has contract at \$16,000 for several blocks of storm sewer, 36-in. to 24-in. in diam.

Tex., Port Isabel—See Water Works.

Telephone Systems

Ga., Chickamauga—Chickamauga Telephone Co. install additional equipment.

Miss., Vicksburg—WQBC, Delta Broadcasting Co., Inc., granted permission by Federal Radio Com'n., Washington, D. C., for construction permit to install new equipment.

Okla., Wapanucka—Southwest Bell Telephone Co., St. Louis, Mo., reported, soon call for bids for repeater station, 1 story, brick. 10-2

Oklahoma—Southwestern Bell Telephone Co., Telephone Bldg., St. Louis, Mo., reported, begin work Dec. 15 at Red River 15 miles south of Durant on construction of underground connections; work will proceed north to Holdenville; erect building to house repeaters at Wapanucks at cost of \$220,000; additional repeaters costing \$140,000 will be installed near Holdenville for service on Oklahoma City line; also install repeaters in Oklahoma City, Shawnee, Stroud and Tulsa at cost of \$400,000.

Tex., Houston—KXYZ, Harris Co. Broadcasting Co., reported, granted permission by Federal Radio Com'n., Washington, D. C., for moving transmitter and studio and installing additional equipment.

Tex., Bronsville—KWVG, Herald Publishing Co., granted permission by Federal Radio Com'n., Washington, D. C., for construction permit to install new transmitter and automatic frequency control.

W. Va., Franklin—Bd. of Trade, reported interested in establishment of telephone line; Chesapeake & Potomac Telephone Co., Charleston, may make survey.

Textile Mills

Ga., Austell—Clark Thread Co., Newark, N. J., reported, has option on site at Austell, for possible erection of cotton thread mill; mill now under consideration is only first of a five unit plant; sites in Alabama and South Carolina also under consideration; J. E. Sirrine and Co., Gen. Engrs., 215 S. Main St., Greenville, S. C., wires regarding the report; Clark Thread Co. considering sites for southern plant; location still undecided. 11-13

N. C., Marion—J. Q. Gilkey, installing machinery and remodeling building formerly occupied by Marion Grocery for homespun weaving plant.

S. C., Anderson—Gossett Mills, reported, increased capital \$5,000,000 to \$6,000,000, permission granted for issuance of \$1,000,000 in preferred stock, the \$5,000,000 of common stock of mills to be divided into 50,000 shares, \$100 a share, par value; mills included in group are Toxaway, Ladlassie and Gossett Dyeing and Finishing Co., all of Anderson; Pendleton Mills, Pendleton; and Williamston Mills, Williamston.

S. C., Bamberg—City, reported, granted permit to Santee Cotton Mills to receive power from South Carolina Power Co.; present plan of company is to eliminate steam plant and operate on transmitted power from power company.

S. C., Taylors—Piedmont Print Works increased capital \$1,000,000 to \$1,350,000.

Tenn., Pikeville—Crowell-Lee Hosiery Mill, F. E. Royal, Treas., reported, install dyeing and finishing plant; installing additional machinery; production capacity 8000 doz. pairs hose monthly.

Va., Berryville—Hillcrest Silk Mills of New York, Frank M. Wray, Atty., Berryville, reported, will acquire and operate plant of Berryville Silk Mills, Inc.

Va., Pulaski—Virginia Maid Hosiery Mills, reported, let contract to Hungerford & Terry, Philadelphia, Pa., for filtration plant to remove iron and anti-chlor from chlorine.

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification

Ala., Mobile—See Sewer Construction.

Ark., Morrillton—Arkansas Power & Light Co., Pine Bluff, reported, construct deep wells; cost \$12,000.

Ark., Hot Springs—U. S. Dept. of Interior Field Headquarters, National Park Service, care of Ch. Engr. Kittredge, 409 Underwood Bldg., San Francisco, Calif., and DuPont de Valin, Hot Springs National Park, receives bids Nov. 24 for construction hot water collecting and distributing system for Hot Springs National Park at Hot Springs.

La., Clinton—Town receives bids Nov. 24 for complete water works system; work includes water mains and specials; tank and tower; pumps, conc. reservoir; pump house, etc.; F. P. Joseph, Consult. Engr., Glenmore. 9-25

La., Marrero—Bd. of Commrs. Jefferson Water Dist. No. 2 let following contracts for \$234,000 water works improvements: J. M. DeFraithe, Inc., 612 State St., New Orleans, for constructing filter plant; P. Olivier & Son, 114 Bilbo St., Lake Charles, for pipe line for water distribution, using monocoast pipe and also for machinery and filter equipment. 11-6

Md., Annapolis—Following estimating on artesian well, pump house, etc., bids opened Nov. 19: Chas. H. French, Hyattsville, Md.; Industrial Power & Equipment Co., 421 W. Camden St., Baltimore; Sprague & Henwood, Inc., P. O. Box 446, Scranton, Pa.; Ohio Drilling Co., P. O. Box 167, Massillon, O.; Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh, Pa.; Virginia Machinery & Well Co., 1319 E. Main St., Richmond, Va.; Sydnor Pump & Well Co., Richmond, Va.; Greenwood Electrical Co., 4849 Chestnut St., Philadelphia, Pa.; Artesian Well Drilling Co., Aramingo and Girard Sts., Philadelphia, Pa.; Baltimore Machine Works, 111 S. Paca St., Baltimore; Newport Contracting & Engineering Co., Lee Hall, Va.; Layne-Atlantic Co., Seaboard Air Line Bldg., Norfolk, Va.; Frank J. Glueck, Land Tide Bldg., Philadelphia, Pa. 9-11

Md., Baltimore—City, Charles F. Goob, Ch. Engr., working on plans, date of opening bids not set for construction of tunnel to carry filtered water from plant at Montebello to Druid Lake. 8-7

Md., Baltimore—Baltimore Clay Products, 2113 W. Lafayette Ave., low bidder at \$6487 for vit. ring pipe for Water Dept. 11-6

Md., Frederick—M. J. Grove Lime Co. has contract for constructing additional 5 ft. on Fishing Creek storage dam. 11-6

Mo., Clarkton—City voted \$20,000 bonds for water works plant. 10-2

Mo., Cuba—F. A. Phelps, Contr. and Engr., Cuba, will open sub-bids soon for water works improvements. See Want Section—Machinery and Supplies. 11-6

N. C., Burlington—City, A. O. Linberg, Consult. Engr., receives bids Dec. 1 for patching and waterproofing old disintegrated conc. reservoir. See Want Section—Bids Asked.

Okla., Mangum—City, H. T. Lawrence, Engr., will open bids about Dec. 20 for water works improvements; work includes pumps, 200,000 gal. elevated tank, etc.

Okla., Wetumka—City, W. H. Burkes, Clk., receives bids Dec. 1 for \$65,000 water supply system, storage reservoir covering 200 acres; earth fill dam; install 2 motor driven pumps; V. V. Long & Co., Engrs., Coleord Bldg., Oklahoma City. 11-13

S. C., Spartanburg—Metropolitan Sub-District "B" receives bids Dec. 16 for water works and sewer system. See Want Section—Bids Asked.

Tex., LaFeria—City voted sewer and water works bonds. H. E. Bennett, Engr., Mercedes.

Texas—See Gas and Oil Enterprises.

Tex., San Antonio—W. D. Masterson, Water Bd. Mgr., reported, let contract to Chicago Bridge & Iron Works, 37 W. Van Buren St., Chicago, Ill., at \$68,000 for 2,500,000 gal. water tank at Sullivan-Pittman Park to provide increased water pressure and a reservoir for emergency; installation of pipes leading to tank and building foundation will make total cost \$140,000; tank will be in form of ornamental tower.

Tex., Church—Trans-Mississippi Utilities Corp., Fort Worth, operating Texas Consum-

rs Water Co., reported, organized Southwest Water Co., a subsidiary to acquire and operate water properties of Southern Union Gas Co., Church and Kingfisher, Okla., plans improvements.

Tex., Houston—City, James H. B. House, Water Commrs., and J. A. Sauls (Ch. Water Works Engr.), has plans for \$1,100,000 improvement program; work includes drilling 6 wells to furnish 18,000,000 gal. daily; reinforcement of distribution system by construction of large mains connecting one plant with another; construction of unit booster pump for Heights plant, 3 miles of 12-in. mains, etc. 11-13

Tex., Port Isabel—Henry Exall Elrod, Houston, reported, has engineering contract on \$135,000 water and sewer system. 10-30

Va., Bluefield—City, reported, plans improvements to water system; \$4,000 bonds available. 8-21

Va., Buena Vista—City voted \$30,000 water works bonds.

Va., Orange—J. B. McCrary Co., Citizens & Southern Bldg., Atlanta, Ga., awarded contract for \$60,000 addition to water works system; plans by Ambler Engineering Co., Richmond. 10-16

Woodworking Plants

Mo., Ferguson—Ozark Chair Co., capital \$50,000, incorporated; C. J. Hardis, Dr. C. O. Hughes, H. J. Tuthill.

FIRE DAMAGE

Ala., Evergreen—Peoples Bank building.

Ark., Jonesboro—Jonesboro Roller Mill; loss \$100,000.

Fla., Fernandina—Fernandina Boat Building Co.'s plant and Peninsular Barrel Co.'s plant.

Ga., Madison—Morgan Hotel owned by B. B. Whitaker.

Ga., Metter—Metter Hotel, J. B. Thigpen, Propr.

Ga., Mt. Vernon—H. A. Simpson's residence.

Ky., Lexington—Storage garage on Greendale Pike owned by Nunneley Brothers.

La., Wisner—W. F. Lang's jewelry store; J. H. Holloway's restaurant; Frank Brocato's store; M. N. Ezell's market and store of Carl Ship & Son; loss \$40,000.

Md., Parkville, Baltimore—Mrs. Mary A. Whitney's residence, Dubois Ave., Parkville.

Md., Shallmar—Tippie at plant of Shellmar Mining Corp.; loss \$28,000.

Miss., Aberdeen—Parkway Hotel; loss \$40,000. Address The Proprietor.

Miss., Greenwood—Plant of Leflore Gin.

Miss., Meridian—A. Farris' store and residence, 35th Ave. and 30th St.

Miss., Starkville—Masonic Temple, first floor occupied by Long & Bell Furniture Co.; loss \$40,000.

Miss., Vicksburg—Dwelling, China and Monroe Sts., owned by Capt. Jack Murphy Estate.

Miss., Woodville—Odd Fellows' Bldg., including C. M. Treppendahl's gen. merchandise business; loss \$69,000.

Miss., Biloxi—Biloxi Grit Co.'s plant at Point Cadet; loss \$25,000.

Miss., Indianola—O. H. Cannon's residence, 506 Alexander Ave.; loss \$9000.

Mo., Kansas City—Building, 2623 McGee Rd., occupied by Carl Hammer's garage and battery shop, Overhead Door Co. and Wizard Radio and Electric Service; loss \$11,000.

Mo., Marthasville—Evangelical Emmaus Home for Feeble-Minded and Epileptics.

Tenn., Chattanooga—Myrtle Terrace Apartment, 755 Oak St., owned by C. C. Moore, Hamilton Natl. Bank Bldg.; loss \$10,000.

Tenn., Chattanooga—Mounting room and stove warehouse of Mascot Stove Co.

Tex., Lockhart—Plant of Lockhart Culling Co.; loss \$15,000.

Va., Flint Hill—J. Frank Thornton's store building.

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Ark., Hughes—Ancient Free and Accepted Masons, C. W. Martin, Chmn., Bldg. Comm., raising funds for temple; preliminary plans complete; \$12,000, brick and stone, 2 stories, about 34x70 ft.; Hubert T. McGee, Archt., Fidelity Bk. Bldg., Memphis, Tenn. 11-14-29

N. C., Mount Airy—Granite Lodge No. 322, A. F. & A. M. selected Harry Barton, Jefferson Standard Bldg., Greensboro, as architect for temple, Franklin and Market Sts.; nothing definite. 11-6

Bank and Office

Ark., Cave City—Bank of Cave City erect bldg. to replace burned structure; razing old bldg.; brick and conc., 1 story.

Ark., Hampton—Hampton State Bank, N. H. Wood, Cashier, considers erecting bldg. to replace burned structure.

D. C., Washington—Standard Oil Company of New Jersey, 241 Pennsylvania Ave., N. W.; \$1,000,000 office and garage bldg.; probably take bids before Jan. 1; Reeder, Elizer & Akers, Mech. Engrs., 916 N. Charles St., Baltimore; steel frame, conc. floors, stone, 6 stories and basement, 71x335 ft., with 200x20-ft. court in rear above second floor; Clyde N. & Nelson Friz, Archts., Lexington Bldg., Baltimore; Lynn Rosebrook Company, Archt., 26 Broadway, New York; Herman F. Doeleman, Struct. Engr., Balto. Trust Bldg., Baltimore. 10-9

Churches

Ala., Whistler—St. Pauls Episcopal Church, Thomas B. Allman, member, plans building.

Ark., Mountain Home—Baptist Church, J. W. Regan, Pres., Bd. of Directors, having plans drawn by R. A. Jordan, Archt. for Sunday School Bld., Southern Baptist Convention, 161 Eighth Ave., North, Nashville, Tenn., for \$20,000 bldg.; brick, 1 story and balcony, 40x77 ft.

D. C., Washington—Church of Christ, care W. S. Plager, Archt., 1930 Kearney St., N. E., erect brick and cast stone trim bldg., 28th and Douglas Sts., N. E.; fireproof, 1 story; bids in.

D. C., Washington—A. L. Aubinoe, Archt., 911 Thirteenth St., N. W., about ready for bids for brick synagogue, 4 1/2 and F Sts., S. W.; 1 story and basement, 50x60 ft., tin roof, steam heat.

Fla., Fort Myers—Congregational Church plans \$40,000 to \$50,000 bldg., McGregor Blvd.; W. O. Sparklin, Archt.; drawing plans.

Ga., Columbus—Calvary Baptist Church, Rev. E. G. Johnston, Pastor, plans to rebuild burned structure; \$10,000; brick, 3 stories, 120x80 ft., conc. foundation; balcony in rear; architect not selected.

La., Carville—Catholic Church Extension Society of United States, care Rt. Rev. R. J. McGuinness, Chicago, Ill., and Leper Home Chapel Society, reported, plan \$50,000 chapel at U. S. Marine Hospital (National Home for Lepers); funds available.

La., Monroe—First Baptist Church, O. B. Morton, Chmn., Bldg. Comm., has plans about completed by R. A. Jordan, archt. for Sunday School Bld. of Southern Baptist Convention, Nashville, Tenn., for \$75,000 Sunday school; raising funds. 7-1

Md., Centerville—John J. Raskob, Claymont, Del., reported, plans \$250,000 Catholic Church and rectory and possibly school near his Pioneer Point Farms estate in Queen Anne County; church to be under supervision of Wilmington diocese, Wilmington, Del.

Md., Hyattsville—Methodist Episcopal Church, South, Rev. C. I. Flory, Chmn., Bldg. Comm., erect \$60,000 church and Sunday School, Maryland Ave. and Marion St.; brick and hollow tile, artificial stone trim, 2 1/2 stories, 40x110 ft.; B. C. Flournoy, Const. Archt., 16 Jackson Place, Washington, D. C.; receiving sub-bids.

Tex., Whiteright—Baptist Church, W. T. Simmons, member, Bldg. Comm., plans building.

Tex., Wichita Falls—First Methodist Church, J. T. Harrell, Chmn., Bldg. Comm., City Natl. Bk. Bldg., plans \$125,000 Sunday school, 11th and Travis Sts.

Tex., San Antonio—St. Anns R. C. Church receives bids Nov. 25 at office Emmett T. Jackson, Archt., Bldrs. Exch. Bldg., for auditorium, school, rectory and sisters' home, Lynwood Ave. and W. Elmsere St.; \$75,000; rein. conc. and brick, 2 stories; W. E. Simpson & Co., Engrs., Milam Bldg.; plumbing, heating and wiring in separate contracts; \$75,000 main auditorium later. 10-30

Va., Arlington—Community Methodist Church, care A. F. Thelander, Archt., Rees Bldg., Clarendon, Va., erect \$25,000 bldg., Virginia Ave. and Courthouse Rd., Aurora Heights, Arlington County.

Va., Newport News—Trinity Methodist Church erect \$40,000 Sunday school; brick, stone trim, 2 stories, 65x96 ft.; plans by Charles M. Robinson Architects, Times-Dispatch Bldg., Richmond; bids Nov. 20.

City and County

Ala., Clanton—Chilton County Bd. of Revenue plans \$40,000 jail; 2 stories; second floor to connect with courthouse by bridge.

Ark., Arkadelphia—Clark County, Geo. Wells, County Judge, voted \$50,000 jail bonds; brick and conc., 2 stories and basement; Arthur A. Brown, Archt., Mercantile Bk. Bldg., Dallas, Tex. 10-23

Ark., Murfreesboro—City voted \$60,000 courthouse and jail bonds.

Ark.-Tex., Texarkana—Miller County, Ark., F. E. Pharr, member, Bldg. Comm., voted \$150,000 jail bonds; face brick, stone and terra cotta trim, enamel brick or enamel painted brick interior walls, 5 stories, tile or cement floors, elevators; Witt, Selbert & Halsey, Archts.; probably call for bids about Jan. 1. 11-6

Ga., Atlanta—Fulton County Bd. of County Commrs. receives bids Nov. 25 for fire station, Sims Ave., Buckhead; \$60,000, 1 story and basement, 79x58 ft., conc. foundation, hollow tile, brick, cast stone or Indiana limestone trim, struct. steel, Buckingham slate and Barrett tar and gravel roof, steam heat; Hentz, Adler & Shute, Archts., Candler Bldg.; Robt. S. Fiske, Engr., Healey Bldg.; following contractors estimating: Williams Construction Co., Red Rock Bldg.; Brazell, Miller & Newbanks, Norris Bldg.; Geo. A. Clayton Co.; J. S. McCauley Co., both Bona Allen Bldg.; W. P. Francis, 201 Luckie St., N. W.; T. C. Wesley & Son, Red Rock Bldg.; Norwood Griffin, Bona Allen Bldg.; Smith & Pew, 435 Green St., N. E.; Donald McIver; C. R. Justl, 101 Marietta St., N. W.; Christian & Bell, Red Rock Bldg.; Ed. R. Hays 859 Edgewood Ave., N. E.; J. H. Hiers, 425 Ridgecrest Road; Pittman Construction Co., Rhodes Bldg.; Geo. Spruill, Moore Mill Road; T. R. Benning, Haas-Howell Bldg.; J. F. Higdon, Silvey Bldg., all Atlanta; W. E. Mashborn, College Park; G. F. Wells, Hapewell; Capital Construction Co., Standard Bldg.; J. F. Holley Construction Co., 254 Capitol Place, S. W., both Atlanta. 10-23

Ga., Barnesville—Lamar County Bd. of Commrs., Ben H. Hardy, Chmn., receives bids Dec. 4 for courthouse and jail; \$60,000, brick, hollow tile, struct. steel, rein. conc., 2 stories and basement, 116x50 ft., comp. and linoleum floors, comp. roof; E. C. Wachen-dorff, Archt., 1010 Standard Bldg., Atlanta, Ga.; following contractors estimating: General—Flagler Co.; T. C. Wesley & Son, both Red Rock Bldg.; J. S. McCauley Co.; Geo. A. Clayton Co., Norwood Griffin Co., all Bona Allen Bldg.; Smith & Pew, 435 Irvin St., N. E.; Pittman Construction Co., Rhodes Bldg.; J. F. Holley, 542 Capitol Place, S. W., all Atlanta; Newton Coal & Lumber Co., Griffin, Ga.; H. H. Brown, Dothan, Ala.; Barnesville Planing Mill Co., Barnesville, Ga.; Ben H. Butts, Jr., Thomaston, Ga.; All States Construction Co., Jacksonville, Fla.; Plumbing and heating—S. S. Shepard Plumbing Co., 86 Hunter St., S. E.; Seckinger Brothers Co., 180 Forsyth St., S. W.; Farrell Heating & Plumbing Co., 248 Ivy St., N. E., all Atlanta. 11-20

Ga., Columbus—Muscogee County Bd. of Commrs., Rhodes Browne, Chmn., remodel and erect addition to jail; rein. conc., brick, 3 stories, 39x39 ft., cells accommodate 90; \$50,000; F. Roy Duncan, Archt., Exchange Bldg.; preliminary plans.

Ky., Lexington—City, Jas. J. O'Brien, Mayor, voted \$350,000 auditorium bonds. 10-16

La., Hahnville—St. Charles Parish Police Jury ready for bids in about 30 days for \$75,000 fireproof jail; bonds voted; rein. conc., brick, fireproof, 3 stories, 35x65 ft., rein. conc. foundation, struct. steel and iron, comp. roof, sheet metal work; steel jail equipment; Wm. R. Burk, Archt., Balter Bldg. 10-2

Miss., Hazlehurst—City Bd. of Aldermen, appointed J. H. Garth and others as comm. to report at Dec. meeting on remodeling of old Baptist Church for city hall. 5-1

Miss., Ruleville—Board of Aldermen erect city hall fire dept. building.

N. C., Valdese—Q. E. Herman, Archt., Hickory, advises erection of jail and town hall indefinitely postponed. 11-13

Okla., Tulsa—City, Geo. Watkins, Mayor, selected A. J. Love, Atco Bldg., as architect for \$50,000 juvenile detention home adjoining Mohawk Park. 2-13

Tex., Abilene—Taylor County voted \$100,000 jail bonds. 10-16

Tex., San Antonio—City, C. M. Chambers, Mayor, have plans ready about Nov. 27 for \$10,000 recreational bldg., Mittman Park; Wilson & Werner, Archts., 735 Milam Bldg.; W. E. Simpson & Co., Engrs., Milam Bldg.; have plans ready in few days for \$6000 recreational bldg., Palm Heights; Wilder & Smith, Archts., 329 Texas Theatre Bldg.; Beretta-Stiles Co., Inc., Engrs., Natl. Bk. of Commerce Bldg. 11-6

Dwellings

Ala., Aniston—Dr. Frank Leyden, 1420 Willmer St., having preliminary plans drawn by Turner & Van Arman, Martin Bldg., for stone residence; 2 stories, 10 rooms.

D. C., Washington—Capt. Frederick Hingsburg, 4700 Connecticut Ave., N. W., erect residence, 5030 Chevy Chase Pkwy., after plans by Ralph S. Bugg.

D. C., Washington—Norman C. Rogers, 1243 24th St., N. W., erect \$11,000 residence, 1429 Locust Rd., N. W., after plans by W. S. Somervell, Archt., 918 F St., N. W.; steel frame, brick, 2 stories. 11-6

D. C., Washington—Frank S. Sanford, 4346 Brandywine St., N. W., erect residence, 4922 Albemarle St., N. W., after plans by Irvin L. Scott.

Ga., Atlanta—F. W. Clare, care Clare & Co., Bona Allen Bldg., receives bids until Nov. 26 for face brick residence, Plymouth Road; brick backing, 1 story and basement, 36x59 ft., tile, hardwood and linoleum floors, Buckingham slate or Johns-Manville tile roof, steam heat, Josam incinerator; Edwards & Sayward, Archts.; Robt. B. Logan, Asso. Archt., both 101 Marietta Bldg.; following contractors estimating: T. C. Wesley & Son; Christian & Bell, both Red Rock Bldg.; J. S. McCauley Co.; Gilbert Beers, both Bona Allen Bldg.; B. H. Burgess, 1230 Gordon St., S. W.; Smith & Pew, 435 Irvin St., N. E. W. P. Francis, 201 Luckie St.

Ga., Columbus—B. H. Hardaway, 1508 Third Ave., erect English type brick and half timber residence; 12 rooms, 3 baths; Smith & Biggers, Archts., Murrah Bldg.; receiving bids.

Miss., Hazlehurst—T. O. Kearney erect brick veneer residence; 2 stories, oak and tile floors, 8 rooms, 2 baths, slate roof; Ye Planry, Inc., Archt., 1713 1/2 Live Oak St., Dallas, Tex.

Mo., Kansas City—D. Keedy Campbell, Vice-Pres. Lowe & Campbell Athletic Goods Co., 1506 Baltimore St., erect English type residence, Overhill Rd. and Verona Terrace, Mission Hills; E. Tanner, Archt.; completing plans.

Okla., Oklahoma City—L. T. Hill, 10 E. Tenth St., erect \$30,000 residence; brick veneer, stone and stucco, 2 stories; Schumacher & Winkler, Archts., Hightower Bldg.; plans soon ready for bids.

Okla., Tulsa—Jas. Harrington, Hunt Bldg., erect \$20,000 residence and garage; frame, 2 stories and basement, 42x71 ft.; Frank M. Olston, Archt., Tulsa Trust Bldg.; soon let contract.

Tenn., Jamestown—Travis Smith erect brick, stone and poplar siding residence; 2 stories and basement, 35 rooms; Petter & wing; O. J. Billis, Archt., 62 Arcade, Nashville.

Tex., Kerrville—Dr. S. E. Thompson erect native stone and rein. conc. residence near Kerrville; Atlee B. & Robt. M. Ayres, Archts., Smith-Young Tower, San Antonio.

Government and State

Ala., Montgomery—Constructing Quartermaster, Maxwell Field, receives bids Dec. 12 for 1 barrack bldg.; accommodate 163 persons, 2 stories and basement, rein. conc., brick and tile, comp. roof. 9-11

Ark., North Little Rock, Little Rock—Col. John R. Fordyce, Little Rock, interested in erection of recreation hall and swimming pool, Camp Pike; former accommodate 1500, latter 250.

D. C., Washington—Supreme Court Building Comsn. probably have foundation plans for \$8,240,000 Supreme Court Bldg., E. Capitol St., Maryland Ave., First and Second Sts., ready for bids in about 30 days; structure Corinthian type, 385x304 ft., central section 4 stories, west front 3 stories and remaining sections lower; fireproof, stone, brick; Supreme Court room 94 ft. square, about 30 ft. high; inclined driveway from basement, elevators, ventilation system, public and private corridors, law libraries on second and third floors; \$1,500,000 available for initial construction; Cass Gilbert, Archt., 244 Madison Ave., New York. 7-10

La., Baton Rouge—Following contractors estimating on \$5,000,000 Louisiana State Capitol, bids Dec. 10 by Gov. Huey P. Long: Geo. J. Glover Co., Inc., Whitney Bldg.; R. P. Farnsworth & Co., Maritime Bldg.; W. Horace Williams Co., Southern Bldg.; O. M. Gwin Construction Co., 3503 Fern St.; J. V. & R. T. Burkes, Inc., Amer. Bk. Bldg.; Caldwell Bros., 816 Howard Ave., all New Orleans; K. C. Wilson, Slattery Bldg.; Ashton Glassell Co., Inc., 260 Cadillac St., both Shreveport; Southern Ferro Concrete Co., 70 Ellis St., Atlanta, Ga.; Underwood Contracting Corp., Louisiana Bldg., New Orleans; Estimators on Plumbing, Heating and Ventilation—Standard Plumbing & Heating Supply Co., 227 Laurel Street, Baton Rouge, La.; A. G. Rose, Inc., 526 Loyola Ave.; American Heating & Plumbing Co., Inc., 829 Baronne St.; Mayer Godchaux Co., Inc., 1331 St. Charles Ave.; Gore & Daubert, Inc., 835 Baronne St.; Sciambra & Masino, Inc., 636 N. Broad St.; Cabirac-Gelpi Plumbing & Heating Co., 4717 Baronne St., all New Orleans; Craft-Rushworth, Ltd., Broad St., Lake Charles, La.; Robinson Bros. Plumbing Co., Lake Charles, and 214 W. Barr St., Pine Bluff, Ark.; Electrical Work Estimators—Hart Enterprise Elec. Co.; E. Freeman, Inc., 713 St. Charles St.; Barnes Electric Construction Co., Ltd., 513 Gravier St.; Sullivan & Phillips, 117 Decatur St.; Electrical Contracting & Engineering Co., 518 Gravier St., all New Orleans; Electric Shop, 216 Texas St., Shreveport, La.; Evans Bros., Ltd., 530 Jackson St., Alexandria, La.; Baton Rouge Electrical & Machinery Works, Inc., 523 Third St., Baton Rouge; Elevators—Otis Elevator Co., 852 Carondelet St., New Orleans; Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg., New Orleans. 11-13

Md., Elkton—Maryland National Guard, Milton A. Reckord, Adjt.-Gen., Armory Place and Howard St., Baltimore, plans armory improvements.

Mo., Jefferson City—Department of Penal Institutions, Col. Frank B. Jones, Director, receives bids until Dec. 2 for following materials for \$750,000 intermediate reformatory, Algoa; struc. steel and iron work; radial brick or rein. tile smoke stack; elect. service elevator; millwork; tubular metal doors, frames and steel bar vent grilles; kalamain doors and frames; metal toilet stall and shower partitions; comp. roofing; gypsum roof tiles; asbestos roofing shingles; glass and putty; sheet metal work; cell doors, bunks, etc.; finishing hardware; exterior and interior brick and tile trim; plumbing materials; heating materials; elect. materials; refrigerating equipment; plans from Department, Jefferson City, or from Wm. B. Ittner, Inc., Archts.-Engrs., 3615 Olive St., St. Louis. 10-30

Okl., Oklahoma City—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids Dec. 23 for extension and remodeling (except elevators) of post office and court house; \$1,100,000; drawings from office Supvg. Archt. 10-2

S. C., Saluda—Mrs. Ida E. Wheeler remodel bldg. for post office, Main St.; new equipment and furniture.

S. C., Spartanburg—Additional firms estimating on \$350,000 post office, bids Nov. 25 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala.; Jas. I. Barnes, New Zimmerman Bldg., Springfield, O.; L. Balkin Co., 1850 W. Austin Ave.; Hallbauer-LaBahn, Inc., 844 Rush St.; J. A. Moraw & Owens Co., 144 W. 47th St.; Henry B. Ryan Co., 500 N. Dearborn St., all Chicago, Ill.; Virginia Engineering Co., Inc., First Natl. Bank Bldg., Newport News, Va.; Ralph Sollitt & Sons Construction Co., 518 E. Sample St., South Bend, Ind.; Wise Granite & Construction Co., Inc., American Natl. Bank Bldg., Richmond, Va.; Murch Bros. Construction Co., Ry. Exch. Bldg.; Wm. MacDonald Construction Co., Svnd Tr. Bldg., both St. Louis, Mo.; Frainie Bros. & Hagley, 19 W. Franklin St.; Warsaw Elevator Co., 111 Mercer St., both Baltimore, Md.; Edw. S. Moore & Son, 510 N. Washington St., Kokomo, Ind.; Jas. DeVault,

Massillon Rd., Canton, O.; Ring Construction Co., Wesley Temple, Minneapolis, Minn.; National Construction Co., Tower Bldg., Washington; W. P. Rose, Wayne Natl. Bank Bldg., Goldsboro, N. C.; Geo. Becking & Son, James Bldg., Chattanooga, Tenn.; Fiske-Carter Construction Co., 121 1/2 W. Main St., Spartanburg, S. C.; C. M. Guest & Son, Sharpe St., Anderson, S. C.; Westbrook Elevator Manufacturing Co., Spring St., Danville, Va.; Gurney Elevator Co., 109 W. 64th St., New York; Westinghouse Electric Elevator Co., 30th and Walnut Sts., Philadelphia, Pa.; General Electric Co., Schenectady, N. Y.; A. B. See Elevator Co., Inc., 1343 H St., N. W., Otis Elevator Co., 810 18th St., N. W., Haughton Elevator & Machine Co., Vermont Bldg., all Washington; Kerscher Elevator Co., 918 Michigan Ave., Toledo, O.; Warner Elevator Manufacturing Co., 2613 Spring Grove Ave., Cincinnati, O.; F. Crote Manufacturing Co., Evansville, Ind.; Shepard Elevator Co., 2413 Colerain Ave., Cincinnati, O. 11-13

Tex., Fort Worth—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., selected Wyatt C. Hedrick, Archt., First Natl. Bk. Bldg., Fort Worth, to draw plans for \$1,245,000 post office and for \$1,215,000 courthouse; former to be erected first; contracts may be let in sections. 8-7

Tex., Fort Sam Houston, San Antonio—Constructing Quartermaster, Fort Sam Houston, receives bids Dec. 12 for 16 officers' quarters, appropriation \$250,000, and 16 non-commissioned officers' quarters, appropriation \$150,000. 7-17

Tex., Mexia—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$71,045 from Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala., for post office. 11-6

Va., Hampton Roads, Norfolk—Navy Dept., Bureau of Yards and Docks, Washington, D. C., receives bids Dec. 3 for steel tank pump house addition, pumps and equipment and piping, Naval Operating Base, fuel depot, Hampton Roads; following are prospective estimators: W. L. Morrison, 69 New Main St., Haverstraw, N. Y.; Columbia Contracting Co., New York; Industrial Power Equipment Co., 421 W. Camden St., Baltimore, Md.; Harrison-Wright Co., 311 Kinney Bldg., Charlotte, N. C.; Equator Heating Co., 1644 E. New York Ave., Brooklyn, N. Y.; Truseon Steel Co., Hill Bldg.; Crane Co., 1225 F St., N. W., both Washington; Bethlehem Fabricators, Inc., Bethlehem, Pa.; Newport Contracting & Engineering Co., Lee Hall, Va.; W. C. Spratt, Fredericksburg, Va. 11-13

Va., Portsmouth—Prospective estimators on post office remodeling, bids Dec. 2 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; General—H. M. Lucas, 115 Bruce Place; J. L. Smith, Bldg. and Loan Bldg., both Portsmouth; W. T. Gregory, Law Bldg.; R. R. Richardson & Co., Inc., Natl. Bk. of Commerce Bldg.; Miller Engineering Corp., Royster Bldg.; E. Bradford Tazewell, Inc., 708 W. 21st St., all Norfolk, Va.; H. Herfurth, Jr., Inc., District Natl. Bank Bldg., Washington; Agostini Bros., 205 E. 42nd St., New York; Earl E. Garber & Co., 203 W. Fourth St., Bethlehem, Pa.; Harwood Construction Co., Law Bldg.; Virginia Engineering Co., Inc., First Natl. Bank Bldg., both Newport News, Va.; Ralph S. Herzog, 10 S. 18th St., Philadelphia, Pa.; Samford Bros., Inc., 301 Washington Ave.; Algernon Blair, First Natl. Bank Bldg., both Montgomery, Ala.; C. W. O'Leary, P. O. Box 225, Fortress Monroe, Va.; Hallbauer-LaBahn, Inc., 844 Rush St., Chicago, Ill.; A. M. Lundberg, Rwy. Exch. Bldg., St. Louis, Mo.; Phelps-Drake Co., Inc., Minneapolis, Minn.; Elevator—Gurney Elevator Co., 109 W. 64th St., New York; Westinghouse Electric Elevator Co., 30th and Walnut Sts., Philadelphia, Pa.; General Electric Co., Schenectady, N. Y.; Salem Foundry & Machine Works, Inc., Salem, Va.; Otis Elevator Co., 810 18th St., N. W.; Haughton Elevator & Machine Co., Vermont Bldg.; A. B. See Elevator Co., 1343 H St., N. W., all Washington; Warsaw Elevator Co., 111 Mercer St., Baltimore, Md. 11-13

W. Va., Clarksburg—Prospective estimators bids Dec. 3 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Construction—Concrete Steel Bridge Co.; Paul S. Horner Co., Horner Bldg.; Henry Haselbacher, 400 West Virginia St., all Clarksburg; English Construction Co., 1311 H St., Washington; J. Clarence Heldreth, Tazewell, Va.; Robt. H. Evans Co., 395 E. Broad St., Columbus, O.; A. M. Lundberg, Ry. Exch. Bldg., St. Louis, Mo.; Samford Bros., Inc., 301 Washington Ave.; Algernon Blair, First Natl. Bk. Bldg., both Montgomery, Ala.; Ward & Ward, Virginia and Treadwell St., Charleston, W. Va.; Yeager & Sons, Danville, Ill.; Fayette Construction Co., 500 W. Short St., Lexington, Ky.; C. A. Moses Construction Co., 176 W. Adams St., Chicago, Ill.; Elevators—A. B. See Elevator Co., 1343 H St., N. W.; Haughton Elevator & Machine Co., Vermont Bldg.;

Otis Elevator Co., 810 18th St., N. W., all Washington; General Electric Co., Schenectady, N. Y.; Gurney Elevator Co., 109 W. 64th St., New York; Westinghouse Electric Elevator Co., 30th and Walnut Sts., Philadelphia, Pa.; Warsaw Elevator Co., 111 Mercer St., Baltimore, Md.; Shepard Elevator Co., 2425 Colerain St., Cincinnati, O.; Kerscher Elevator Co., 918 Michigan Ave., Toledo, O. 11-6

W. Va., Morgantown—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$71,950 from Saml. Plato, 608 W. Walnut St., Louisville, Ky., for extension and remodeling of post office. 11-6

Hospitals, Sanitariums, Etc.

Ark., Benton — Arkansas Construction Comsn., Room 200, Marion Hotel, Little Rock, Jos. M. Hill, Chmn., receives bids until Dec. 15 for first unit of Farm Colony of new \$3,250,000 State Hospital for Nervous Diseases, Saline County; structures consist of 4 patients' dormitories, 1 assembly bldg. and 1 cafeteria and kitchen bldg.; Colonial type, fireproof, red brick and conc. stone trim; plans from Mann, Wanger & King, Archts., New Donaghey Bldg., Little Rock; 4 additional dormitories to start upon completion of above; completed project to consist of about 20 structures; Sullivan W. Jones, Consit. Archt., 25 W. 45th St., New York; Lund Engineering Co., Engrs., Home Ins. Bldg., Little Rock; contract for deep well let to L. B. Clifford Well Supply Co., Texarkana, Ark-Tex. 9-18

Ark., Harrison—City may vote on \$40,000 municipal hospital bonds; Boone County Medical Society interested; brick and conc., 2 stories and basement, 35 rooms; Petter & McAninch, Inc., Archts., Pyramid Life Bldg., Little Rock. 3-27

D. C., Washington—Department of Interior, 18th and F Sts., probably have plans ready in about 30 days for 2 bldgs. for St. Elizabeth's Hospital, Anacostia; about \$420,000; plans being drawn by U. S. Veterans Bureau, L. T. Tripp, Ch., Constr. Div., Arlington Bldg. 6-27

D. C., Washington—Department of Interior, 18th and F Sts., probably have plans ready in about 10 days for \$155,000 addition to Freedman's Hospital; brick, stone, fireproof, 3 stories, 40x135 ft.; Jas. Berrall, Archt., Colorado Bldg. 4-10

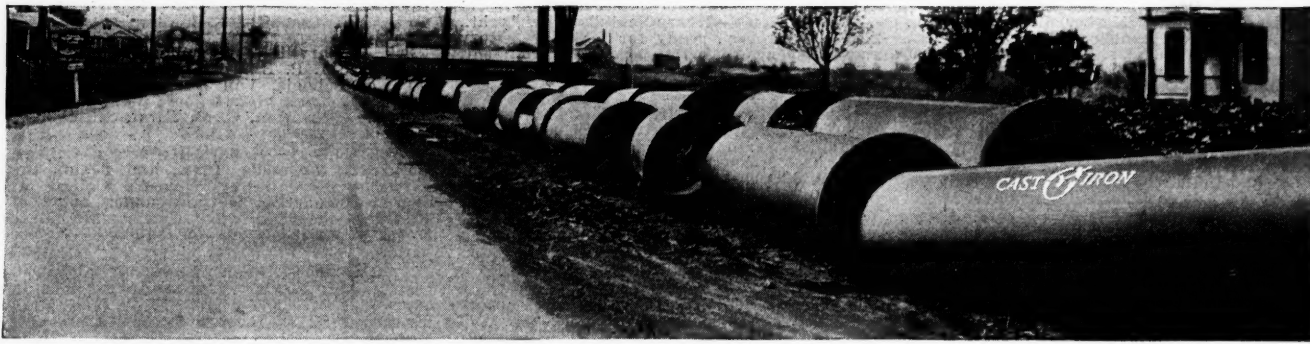
Md., Baltimore—City Bureau of Bldgs., City Hall, having plans drawn by O. Eugene Adams, Archt., 329 N. Charles St., for kitchen at Hospital for Communicable Diseases, Montebello; brick, 2 stories; Herman F. Doeelman, Struct. Engr., Balto. Tr. Bldg.

Ky., Pikeville—Methodist Hospital of Kentucky, S. K. Hunt, Supt., tentatively approved sketches for fireproof nurses' home; work probably start in early Spring; brick, 65,000 cu. ft.; probably purchase material and contract labor. 11-6

La., Pineville—Central Louisiana Hospital for Insane remodel Parker Bldg. No. 1; \$15,000; E. Leo Ball, Archt.

Md., Fort George G. Meade—following contractors estimating on nurses' quarters, bids Dec. 3 by Constructing Quartermaster: Henry L. Maas & Sons, Inc., 1119 Ensor St.; T. F. Watta, 12 W. Madison St.; David J. Farban, 1123 E. Baltimore St., all Baltimore, Md.; Minter Homes Corp., Dundalk, Baltimore; National Contracting Corp., Laurel, Md.; Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala.; Murch Bros. Construction Co., Ry. Exch. Bldg., St. Louis, Mo.; Geo. F. Hazelwood, Howard St., Cumberland, Md.; Ira L. Wales, Glyndon, Md.; Ralph S. Herzog, 10 S. 18th St., Philadelphia, Pa.; Earl E. Garber & Co., 203 W. Fourth St., Bethlehem, Pa.; N. C. Nelson, Inc., 853 Broadway, New York; Power Construction Co., College Park, Md.; Bahen & Wright, 916 Rhode Island Ave., N. E., Washington. 11-6

Miss., Gulfport—Additional prospective estimators on bldgs., U. S. Veterans Hospital, bids Nov. 25 by U. S. Veterans Bureau, Arlington Bldg., Washington, D. C.; General—A. K. Adams Co., 542 Plum St., N. W., Atlanta, Ga.; Hutter Construction Co., Fond du Lac, Wis.; Fleischer Engineering & Construction Co., Wrigley Bldg., Chicago, Ill.; Yeager & Sons, Danville, Ill.; Jos. A. Tintari, 22 Illinois St., Chicago Heights, Ill.; Ralph Sollitt & Sons Construction Co., 518 E. Sample St., South Bend, Ind.; W. P. Rose, Wayne Natl. Bk. Bldg., Goldsboro, N. C.; B. W. Construction Co., 720 Cass St., Chicago, Ill.; E. G. Lawley, 1418 Twenty-fifth Ave., Gulfport, Miss.; Plumbing and Heating—Hamilton Bros. Co., Gulfport; Mason & Dullion, 3024 Third Ave., South, Birmingham, Ala.; Loftis Plumbing & Heating Co., 45 Mangum St., N. W., Atlanta; O'Pry Heating & Plumbing Co., Walton Bldg., Atlanta; Alonzo B. Hayden, Inc., Pass Christian, Miss.; Frank P. Boyd, 1019 Lafayette Ave., Columbus, Ind.; Material—Crane Co., 1225 I St., N. W., Washington; Decatur Iron & Steel



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Mo., St. Louis—Jewish Hospital, Aaron Waldheim, Pres.; Graham, Anderson, Probst & White, Archts., 1313 Chemical Bldg., St. Louis, and Ry. Exch. Bldg., Chicago, Ill.; Waldheim Health Clinic and David Elsemann Hospital for chronic invalids; work again postponed; very likely call for new bids when ready to go forward. 2-13

Okla., Elk City—Community Hospital Assn. raising funds for 3-story brick, stone and rein. conc. hospital.

S. C., Laurens—Laurens County voted \$50,000 hospital bonds; \$50,000 to be given by Duke Endowment, Charlotte.

Tenn., Murfreesboro—Commonwealth Fund, Madison Ave. and 57th St., New York, has bids in for \$75,000 Rutherford County health unit and \$15,000 improvements to Rutherford County Hospital; brick, 1 story, 34x130 ft.; Henry C. Pelton & Jas. Gamble Rogers, Archts., 415 Lexington Ave., New York; A. E. Hanson, Plb. Engr.; Jaros & Blum, Heating Engrs., both 1350 Broadway, all New York. 10-30

Tenn., Nashville—City, Y. W. Hailey, Chmn., Hospital Bld., 1308 Stratton Ave., ready for bids about Nov. 20 for remodeling and enlarging Nashville General Hospital; \$500,000 bonds previously noted voted; brick, steel and conc., 150 beds; Asmus & Clark, Archts., Nashville Tr. Bldg. 7-10

Hotels and Apartments

Ala., Dauphin Island—H. D. Bacon establish and operate hotel and amusement facilities on section of city-owned tract at Fort Gaines on Dauphin Island; other improvements include golf course, museum facilities, etc.; expend \$50,000 in first two years; in event of construction of bridge between island and mainland an additional \$150,000 will be expended for development purposes.

Fla., Holt—Ringling & White, reported, purchased 50,000-acre site and develop for small farms and orchards; erect hotel in connection.

Ga., Atlanta—Real Estate Operators, Inc., R. P. Pool, 664 Linwood Ave., N. E., plans to start work soon on 3-story, brick, 36-apartment on Barksdale Drive, Ansley Park; stone trim, comp. roof, hardwood and tile floors, steam heat.

La., Monroe—H. and S. Masur, 900 N. Second St., erect two 2-story apartment buildings, Forsythe Ave. and N. Fourth St. and Eighth Ave. and N. Sixth St.; brick; Love & Barr, Archts., Bernhardt Bldg.; bids in.

Mo., St. Louis—Sam Gallop, 501 Purdue St., ready for bids on 2-story, 110x60 ft., brick 12-apartment, 3115-17 Cherokee St.; comp. roof, hardwood floors, steam heat; Ben Shapiro, Archt., Synd. Trust Bldg.

Mo., St. Louis—Henry Schildknecht, Archt., 2107 Alfred Ave., ready for bids for 3-story and basement, 29x9 ft., brick, 18-apartment, 2832 Russell Ave.; stone foundation, comp. roof, probably steam heat.

Okla., Norman—Aldridge Hotel Co., We-woka, having plans prepared by Guy A. Reid, Oklahoma Savings & Loan Bldg., Oklahoma City, and plans to start work in about 30 days on \$300,000, 6-story, rein. conc., 80-room hotel. 11-13

Okla., Oklahoma City—Layton, Hicks & Forsythe, Archts., Braniff Bldg., have plans ready about Jan. 1 for \$2,500,000, 26-story and basement, 100x140 ft. Skirvin Tower across street from Skirvin Hotel; reported to be erected for group of eastern capitalists headed by J. W. Colvin, of Colvin & Co., 35 Wall St., New York; to be operated by Skirvin Operating Co., W. B. Skirvin, Pres., Skirvin Hotel; to be built in two wings to height of 23 stories and bridged at 24th floor; roof garden on 26th floor to accommodate 1000 people; first floor for shops; fourth to 24th floors for 700 guest rooms, 25th for kitchen, private dining rooms and banquet hall; 5 passenger elevators and 4 service cars. 9-4

Tex., Corpus Christi—Dr. J. C. Whitley has plans by L. S. Sanderson for Casa Del Mar Apartments at Whitley Beach; 16 suites from 3 to 6 rooms; all accommodations are outside quarters centered around patio containing fountain, patio furniture, flower garden; plans beach hotel which will also be of Spanish architecture.

Miscellaneous

Ark., Hot Springs National Park—Fountain Lake Corp., Lewis Hays, Community Bank Bldg., having plans prepared by I. D. McDaniel, 1101 Central Ave., for hotel, dance pavilion, 75 to 100 cottages, swimming pool, etc., in connection with improvements at Fountain Lake Resort, 5 miles east on Little Rock Highway; ready for bids about Jan.; artificial lake 440 yds. long, trolley line connecting city with resort; cost about \$100,000.

D. C., Washington—Directors of Oscar S. Straus Memorial Assn., Inc., 112 W. 59th St., New York, accepted Treasury Department's offer of site at entrance to Great Plaza, facing Commerce Bldg., for memorial to former ambassador to Turkey.

Fla., Miami—E. P. Whelan purchased site, Fifth St. and Alton Road; plans \$25,000 grill later.

Fla., Wakulla—Wakulla County Hunting and Fishing Club erect \$10,000 clubhouse on 10,000-acre site between mouth of St. Marks River and Spring Creek, including 3 miles of Wakulla River.

Ga., Savannah—M. M. May, 1226 E. Henry St., plans rebuilding Thunderbolt Casino recently destroyed by fire at loss \$60,000.

Mo., St. Louis—Kutis Undertaking Co., Thos. F. Kutis, 2006 Gravois Ave., erect 2-story and basement, brick funeral parlor, Gravois Ave. and Crittenden St.; Rudolph Weinberger, Archt., 2043 Allen Ave.

Okla., Tulsa—Tulsa County voted \$500,000 bonds for Tulsa State Fair, John T. Kramer, Sec.-Mgr.; plans include erection of swine exhibits and one for sheep exhibits, auditorium, livestock pavilion, building for grandstand to seat 15,000 people; also provide for sewage and structures, walks, roads, landscaping, etc. 10-9

Tex., Edinburg—Kreidler Undertaking Co. having plans prepared by R. L. Vogler for brick and hollow tile, fireproof funeral home.

Tex., Gonzales—Michelson Brothers remodel store building for Michelson Cafe No. 33; P. G. Silber & Co., Archts., Bedell Bldg., San Antonio; bids in.

Railway Stations, Sheds, Etc.

La., New Orleans—Louisiana Public Service Comsn., Francis Williams, Chmn., received surveys and estimate cost of elevated downtown union station at North Basin and Toulouse Sts. from C. E. Smith & Co., Engrs., Railway Exchange Bldg., St. Louis, Mo.; to be used by Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky., Southern Ry. System, A. A. Woods, Ch. Engr., M. W. & S., Lines West, Cincinnati, Ohio, and Southern's tenant lines; passenger terminal facilities and elevated tracks estimated to cost \$6,300,000; station proper, \$3,090,802; elevated approaches of New Orleans Terminal Co., \$377,877, while elevated approaches of Louisville & Nashville would cost \$2,703,783; signals and interlocking devices, \$150,000. 9-13-28

Mo., Valley Park—Missouri-Pacific R. R. Co., E. A. Hadley, Ch. Engr., Missouri-Pacific Bldg., St. Louis, erect 1-story, 18x46 ft., stone passenger station; comp. roof; E. M. Tucker, Archt. for company.

Schools

Ark., Cedarville—Cedarville Special School Dist., care J. P. Bingham, Crawford County Supt. of Schools, Van Buren, plans one or two-story, brick high school; plans by State Dept. of Education, C. M. Hirst, Statehouse, Little Rock.

Ark., Conway—Hendrix-Henderson College, Dr. J. H. Reynolds, Pres., and Senior Department of Galloway Women's College at Searcy considering merging under name of Trinity College; Hendrix-Henderson College recently started work on \$150,000 science hall. 10-23

Ark., Hughes—Hughes Rural Special School Dist., R. C. Nickle, Pres., ready for bids in about two weeks for gymnasium and auditorium; 140x130 ft., brick, stone trim, seat 1000 people; George Mahan, Jr., Archt., Everett Woods, Asso. Archt., both Manhattan Bank Bldg., Memphis, Tenn.; Mr. Mahan also preparing plans for brick high school; both structures to cost \$90,000.

Ark., Lewisville—Bradley Special School Dist., J. B. Edwards, Pres., erect \$25,000 2-story and basement, 12-room and auditorium school; plans by State Dept. of Education, C. M. Hirst, Statehouse, Little Rock, Ark.

Ark., Marked Tree—Marked Tree Special School Dist. No. 1, care Poinsett County Bd. of Education, W. R. Payne, Pres., Harrisburg, selected Estes W. Mann, Cotton Exchange Bldg., Memphis, Tenn., to prepare plans for \$50,000 junior and senior high school; brick and conc., 2 stories. 10-16

Ark., Ola—Special School Dist., plans erecting \$100,000, 2-story, brick and conc. high school in Spring.

D. C., Washington—District Commrs., Room 509, District Bldg., have low bid at \$1,249,000 from National Construction Co., Tower Bldg., Washington, for Theodore Roosevelt High School. 11-16

D. C., Washington—District Commrs., 509 District Bldg., receives bids Dec. 5 for 8-room school, Northampton St. and Broad Branch Road, N. W., to cost \$132,500; receives bids December 3 for 8-room Horace Mann School, Newark St. between 44th and 45th Sts., N. W., to cost \$135,669; plans and specifications at Room 427, District Bldg.

Ga., Metter—Lanier Dist., H. L. Carkee, Chmn., erect \$20,000, 1-story and basement, 10-classroom and auditorium, brick veneer school near Metter; comp. roof.

Ga., Savannah—Chatham County Bd. of Education soon call for bids for junior high school in Catham Crescent; \$180,000 to \$225,000, 24 rooms; 3 stories, rein. conc., brick and tile, stone trim, comp. roof; Levy & Clarke, Archts., Blum Bldg.; Cletus Bergen, Constl. Archt., Liberty Bank & Trust Bldg.

La., Fort Allen—School Bd., J. H. Bres, Supt., receives bids Dec. 1 for two additions to high school and necessary sewerage connections.

La., Vacherie—St. James Parish School Bd., R. P. Laurey, Supt., Luther, ready for bids in about two weeks for 2-story, 70x90 ft., frame, 10-classroom and auditorium school at Vacherie, additions and repairs to school at Romeville; Wm. R. Burk, Archt., Balter Bldg., New Orleans. 9-25

N. C., Maiden—Catawba County School Bd., J. A. Capps, Newton, rebuild second and third floors of school recently damaged by fire; \$17,000; 3 stories, 105x40 ft., gum floors, built-up roof; Benton & Benton, Archts., Fidelity Bldg., Wilson; addresses equipment proposals to J. B. Whitener, Maiden. See Want Section—Building Material and Equipment. 11-6

Okla., Henryetta—Bd. of Education, Lilly H. Shaw, Clk., erect school; bids in.

Okla., Middleberg—Bd. of Education erect \$15,000, 1-story and basement, brick school; E. H. Eads & Co., Archts., Chickasha; bids in.

Okla., Norman—University of Oklahoma Bd. of Regents approved budgets including \$1,050,000 for new buildings and \$1,800,000 for permanent improvements, summer school and extension division.

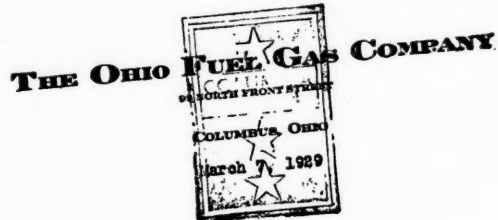
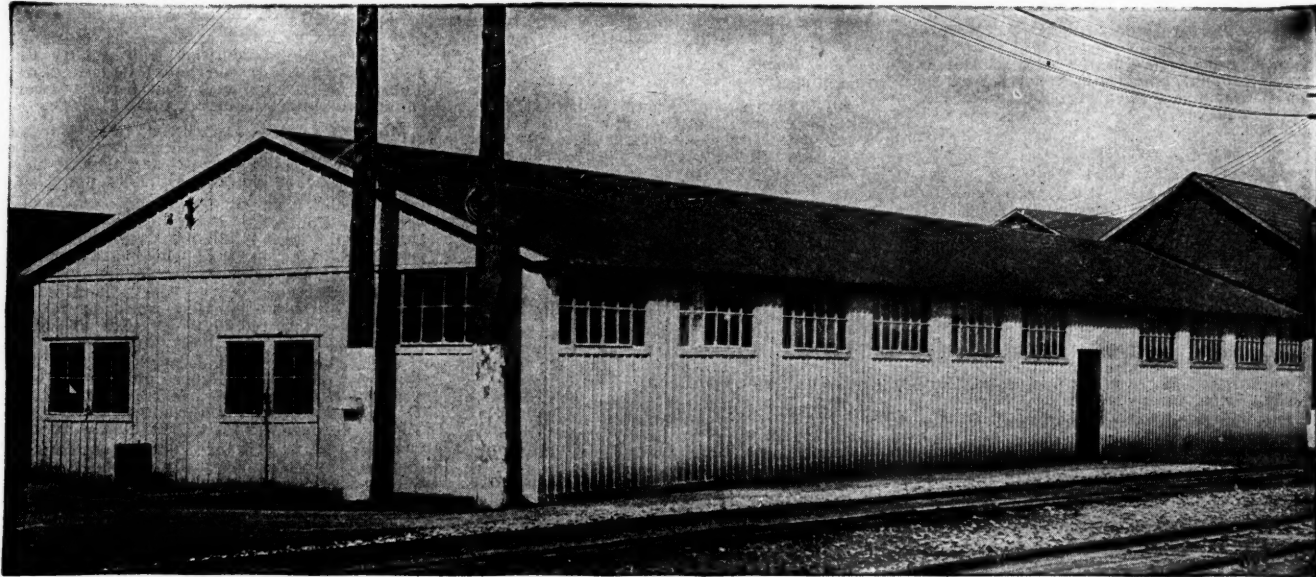
Okla., Ponca City—Bd. of Education, L. K. Meek, Chmn., ready for bids about Jan. for remodeling Roosevelt School and Junior High School; J. G. Cannon, Archt.

Tenn., Bristol—Mayor and City Commrs. passed ordinance providing for issuance of \$16,000 school bonds.

Tex., Denton—College of Industrial Arts, Texas State College for Women, W. M. Lovelless, Bus. Mgr., receives bids Dec. 9 for \$150,000, 3-story, brick, stone and rein. conc. dormitory; separate bids as follows: General contract, heating, electric, plumbing; plans at office Henry Coke Knight, Archt., Wilson Bldg., Dallas. 10-30

Tenn., Knoxville—State Bd. of Control, P. L. Harned, Commr., War Memorial Bldg., Nashville, remodel two residences on campus of University of Tennessee; \$18,000.

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Tex., Galveston—School Bd., John Neethe, Pres., plans following building program for which \$2,000,000 is available: Junior high school, West End; junior high school, East End; elementary school, 48th St. and Ave. R; elementary school, 51st St. and Avenue N; elementary school for colored, East End; elementary school for colored, 35th St. and Avenue N, West End; elementary school for colored, north of Broadway, West End; 6-room annex and shop, Central High School, colored.

Tex., San Antonio—Dr. J. A. McIntosh, Pres., San Antonio School Bd., announced that city may vote latter part of December on \$1,750,000 bonds for constructing additional rooms to elementary, junior and senior high schools. 11-13

Stores

Ga., Atlanta—Massell Realty Co., E. C. Selz, Archt., Massell Bldg., expend \$25,000 for improvements to Crumley Bldg.; 6 stories.

Ga., Marietta—Blair Estate, L. M. Blair, having plans prepared by A. Barili, Jr., Forsyth Bldg., Atlanta, for rebuilding store on North Park Square, recently damaged by fire; 2 stories and basement, 25x100 ft., brick, tar and gravel roof; W. A. Florence Dry Goods Co., Lessee.

Ga., Marietta—Mrs. J. E. Baxter soon receive bids for repairs to building, N. Park Square, noted damaged by fire; 2 stories, 30x75 ft., brick, comp. roof.

Ga., Savannah—Jack Rabhan & Co., Morris Rabhan, V. P., 207 W. Broughton St., remodel 3-story store, 15 W. Broughton St.

Ky., Greenville—M. B. McDonald and J. L. Rogers erect 2-story, brick store and office building on W. Cross St.

La., Baton Rouge—Cash Grovery & Sales Co., 406 First St., receives bids Nov. 24 at office Jones, Roessle & Olschner, Archts., Raymond Bldg., Baton Rouge, for 1-story, 98x106 ft., brick and hollow tile grocery sales room and warehouse.

La., New Orleans—Following contractors estimating on \$25,000, 2-story and mezzanine, 30x107 ft., brick, stone trim store for Sch-

nack Jewelry Co., 1024 Second St., bids Nov. 25; Tudor & Ratcliff, Commercial Bank Bldg.; R. L. Roland, 1908 Lee St.; A. A. Gremillion Co., 1030 Washington St.; Waters Building Co., Harris St.; R. J. Jones, Pineville St., all Alexandria; Clifford H. King, Prescott Lane, Baton Rouge; Herman J. Duncan, Archt., 120 Murray St., Alexandria. 11-13

La., Wisner—John McLeMore soon let contract for one-story, 50x100 ft., brick building to replace recently burned structure; to be occupied by Carl Shipp & Son, general merchants, and Sanitary Barber Shop.

La., Wisner—G. E. Allen erect brick store to replace recently burned structure.

Md., Baltimore—Hyman Blumenfeld, 2224 Eutaw Place, remodel 3-story building, 110 Park Ave., for women's ready-to-wear shop to be operated by Tillie Rosenblum, 859 W. North Ave.

Miss., Hattiesburg—Scott Stores, subsidiary of Butler Brothers, Rand and Canal Sts., Chicago, Ill., leased Heidelberg Bldg., and expend \$20,000 for improvements; 2 stories, brick, 60x90 ft.

Mo., St. Louis—Edward Jacobs, 5227 Enright St., having plans prepared by Klipstein & Rathmann, 316 N. Eighth St., for remodeling theater, Grand and Arsenal Sts., for store; Walgreen Drug Co., M. T. Johnson, 744 Bowen Ave., Chicago, Ill., Lessee; 2 stories and basement, brick.

Tex., Beaumont—A. Szafr, 595 Fifth St., expend \$40,000 for rebuilding old Y. M. C. A. building on Forsythe St. for stores; 3 stories, brick, limestone and plate glass front; Babin & Neff, Archts., Perlstein Bldg.

Tex., Brownsville—Mrs. James La Gro plans 1-story, tile and stucco store for Piggy Wiggly Stores, S. M. Harvey, Mgr., Brownsville.

Tenn., Chattanooga—Adams Block Co., Alexander Chambliss, Pres., Provident Life Bldg., rebuild Adams block, 8th and Georgia Ave.; 3 stories, 120x150 ft.

Tenn., Knoxville—W. P. Washburn, Kingston Park, erect brick building, W. Cumberland Ave. and Market St., for 5 stores.

Kenneth C. Miller, Archt.; Peyton B. Strobel Construction Co., Contr., both 206 E. Lexington St.

Md., Baltimore—Thos. Mullan, Bldr., 3945 Greenmount Ave., erect 6 brick dwellings, Ridgemed Rd.; 2½ stories, 24x36 ft.; \$75,000.

Mo., St. Louis—E. Elam, 806 Chestnut St., erect 7 brick dwellings, 6706-6039 Oleatha St.; 1 story, 27x45 ft., comp. roofs, hot water heat; \$35,000; G. C. Kar, Archt.-Contr., 6909 Marquette St.

Mo., St. Louis—Walter Scott Realty Co., Paul Brown Bldg., purchased 18 lots, North Pointe; erect number 5- and 6-room dwellings; one under constr.; total \$153,000.

Mo., St. Louis—G. C. Reed, 5914 Morganford St., erect 3 brick dwellings, 6801-05 Parkwood Place; 1 story, 25x37 ft., asphalt shingle roofs, hot air heat; \$13,500; plans and constr. by owner.

N. C., Charlotte—E. R. Cannon, 500 E. Boulevard, erect \$20,000 residence, 701 Queens Rd.; 9 rooms; Southeastern Construction Co., Contr., 210 W. Second St.

Okla., Oklahoma City—Clark Cunningham, 706 W. 19th St., started work on \$10,000 duplex and garage, 1725 W. 18th St.; brick veneer, 2 stories, 46x40 ft.; day labor.

Okla., Tulsa—H. E. Russell, 1513 E. 16th St., erect \$10,000 residence and garage; brick veneer, 2 stories and basement, 32x46 ft.; C. D. Walters, Archt., Alexandria Bldg.; Morris W. Turner, Contr., 401 S. Peoria St.

Texas—State Bd. of Control, Austin, let contract at about \$10,000 to Rube Sessions, Wells, Tex., for 25 frame cottages, Alabama and Coushatta Indian Reservation, Polk County; 1 story, 22x28 ft., wood floors, concrete foundations, corrugated galvanized iron roofs. 11-13

Tex., Houston—W. L. Edmundson, Bldr., Second Natl. Bank Bldg., erect 11 brick veneer dwellings, 2311-13 Craigmont, 1302-05-06-10-14 and 1106-10-12 Pearson, and 1118 Elliston Sts.; total \$23,400.

Government and State

Ala., Montgomery—Following sub-contracts let on \$125,000 Air Corps Tactical School Maxwell Field, on which steel work is half completed: Roofing and sheet metal, Acme Roofing Co., 122 Bell St.; cement and plaster, Southern Building Supply Co., 127 Commerce St.; elect. work, Montgomery Electric Co., 12 N. Perry St.; plumbing and heating, Perry & McDonald, 317 Dexter Ave.; fire clay flue lining, Manufacturers' Warehouse, 30 Commerce St., all Montgomery; misc. and orna. metal, Decatur Iron & Steel Co., Decatur, Ala.; struct. steel, Nashville Bridge Co., foot of Shelby Ave., Nashville, Tenn.; glass and glazing, Binswanger & Co., 653 Elson St., Memphis, Tenn.; expanded mesh, rein. lath, etc., United States Gypsum Co., Candler Bldg., Atlanta, Ga.; rein. bars, etc., Truscon Steel Co., 513 N. 21st St.; steel sash, Detroit Steel Products Co., 2431 First Ave., both Birmingham, Ala.; millwork, McPhillips Manufacturing Co., foot of Lawrence St., Mobile, Ala.; limestone and granite, E. H. France Granite Co., 1015 Fifth St., Macon, Ga.; finish hardware, Shapleigh Hardware Co., 315 Washington St., St. Louis, Mo.; cork insulation, Armstrong Cork & Insulation Co., Candler Bldg., Atlanta, Ga.; Fischer & Hayes Rope & Steel Co., 844 W. Erie St., Chicago, Ill.; air cooling equipment, Niagara Blower Co., Buffalo, N. Y.; Superior Lime & Hydrate Co., Pelham, Ala. 9-11

Ga., Augusta—United States Veterans Bureau, Arlington Bldg., Washington, D. C., let contract at about \$220,000 for acute bldg., U. S. Veterans Hospital, to W. P. Rose, Wayne Natl. Bk. Bldg., Goldsboro, N. C.; contract for \$8000 to \$10,000 of cement roads to W. F. Bowe Construction Co., Augusta; structure rein. conc., hollow tile, cast stone, marble, floor and wall tile, rubber tile and linoleum floors, iron work, steel sash, steel stairs with slate treads, slate, metal and built-up roofing, metal lathing, stucco work, elect. elevator, outside sewer, water, steam and elect. distribution systems. 11-6

Tex., Randolph Field—Constructing Quartermaster, Capt. A. W. Parker, let contract to Robt. F. McKee, 1916 Texas St., El Paso, for 3 duplex officers' quarters Mission type masonry, stucco, 2 stories, 57x37 ft., tile roof; W. E. Simpson & Co., Engrs., Milam Bldg., San Antonio. 11-6

Hospitals, Sanitariums, Etc.

D. C., Washington—United States Veterans Bureau, L. H. Tripp, Ch., Constr. Div., Arlington Bldg., let contract to Mech Bros. Construction Co., 611 Olive St., St. Louis, Mo., for \$200,000 administration bldg., U. S. Veterans Hospital, Mt. Alto; rein. conc., hollow tile, cinder conc. blocks, brick and stone, cast stone, marble, floor and wall tile, com-

BUILDING CONTRACTS AWARDED

Churches

Ga., Atlanta—Kirkwood M. E. Church, Jack Brigham, Chmn., Bldg. Comm., 70 Whitehall St., S. W., erect \$15,000 Sunday school; brick veneer, 2 stories and basement, conc. foundation, wood floors, comp. roof, steam heat; owner builds.

Tex., Houston—Central Baptist Church, Rev. L. Richardson, Pastor, 4902 Texas St., erect \$65,000 bldg.; 2 stories and basement, 91x131 ft.; contract let.

Tex., Palestine—First Baptist Church, Rev. Calvin Nelson, Pastor, let tentative contract at \$18,800 to B. A. Harrison, Palestine, for Sunday school; face brick, 3 stories, 50x70 ft., cement and pine floors, Bird roof; Will N. Noonan Co., Archt., Bldrs. Exch. Bldg., San Antonio. 10-2

City and County

La., Shreveport—Caddo Parish Police July let contract at \$7584 to F. E. Griffin, 3010 Creswell St., for juvenile detention home, Murphy St., and at \$3760 to H. & S. Construction and Engineering Co., Ricou-Brewster Bldg., for razing old parish jail. 10-16

Miss., Jackson—Venetian Blind Co., Houston, Tex., has contract for blinds for \$850,000 Hinds County courthouse. 6-26

S. C., Florence—Florence County Bd. of Comms. let contract for \$11,000 orphanage.

Tex., Beaumont—M. F. Yount, 1376 Calder St., Beaumont, has contract for Manitou (Colo.) green stone for base and window spondrels for \$1,000,000 Jefferson County courthouse; Indiana limestone, Indiana Limestone Co., Indianapolis, Ind.; Acme exterior brick, J. Imhoff & Sons, 401 Seventh St., Port Arthur, Tex.; brick for inside walls, Texas Builders Supply Co., 1109 South St.; Fred A. Stone, Goodhue Bldg., and A. Babin, Perlstein Bldg., architects; McDaniel Bros., Contrs., Kyle Bldg., all Beaumont. 11-13

Dwellings

D. C., Washington—Wm. Montgomery, Pres., Acacia Mutual Life Assn., 101 Indiana Ave., N. W., excavating for \$90,000 residence, Nebraska Ave. and Daniels Rd., N. W.; rubble stone, 2½ stories, 41x129 ft., oak floors, conc. and stone foundation, slate roof; Porter & Lockie, Archts., Architects Bldg.;

Thos. W. Marshall, Engr., 1341 Connecticut Ave.; Bradbury & Mohler, Contrs., Chandler Bldg. Address Contrs. See Want Section—Building Material and Equipment. 11-13

Fla., Miami Beach—Robt. L. Weed, Archt., 2620 Biscayne Blvd., Miami, erect \$12,000 residence and garage, 2620 Biscayne Blvd.; plans by owner; Wm. F. Bonsack, Contr., Lincoln Rd., Miami Beach.

Ga., Atlanta—Mrs. Bell J. Woodruff, 185 Stewart Ave., S. W., erect brick veneer residence, 1710 Flagler Ave., N. W.; 1 story, 6 rooms, hardwood and tile floors, comp. roof, hot air heat; owner builds.

Ga., Macon—P. T. Anderson, Jr., 454 Cheny St., erect brick and stone residence, Shirley Hills; 2 stories, conc. foundation, hardwood and tile floors, slate or tile roof, steam heat; M. E. Shaw, Contr., 1805 Vineville Ave.

La., New Orleans—Miss Sophie Orduna, 2587 Drenx Ave., erect residence, Drenx Ave. near Arts St.; O. F. Harang, Contr., 6008 Catina St.

La., New Orleans—Mrs. R. Teems erect 1-story residence, 4922 Annunciation St.; asbestos roof; Trinity & Stamps, Contrs., 9022 Palm St.

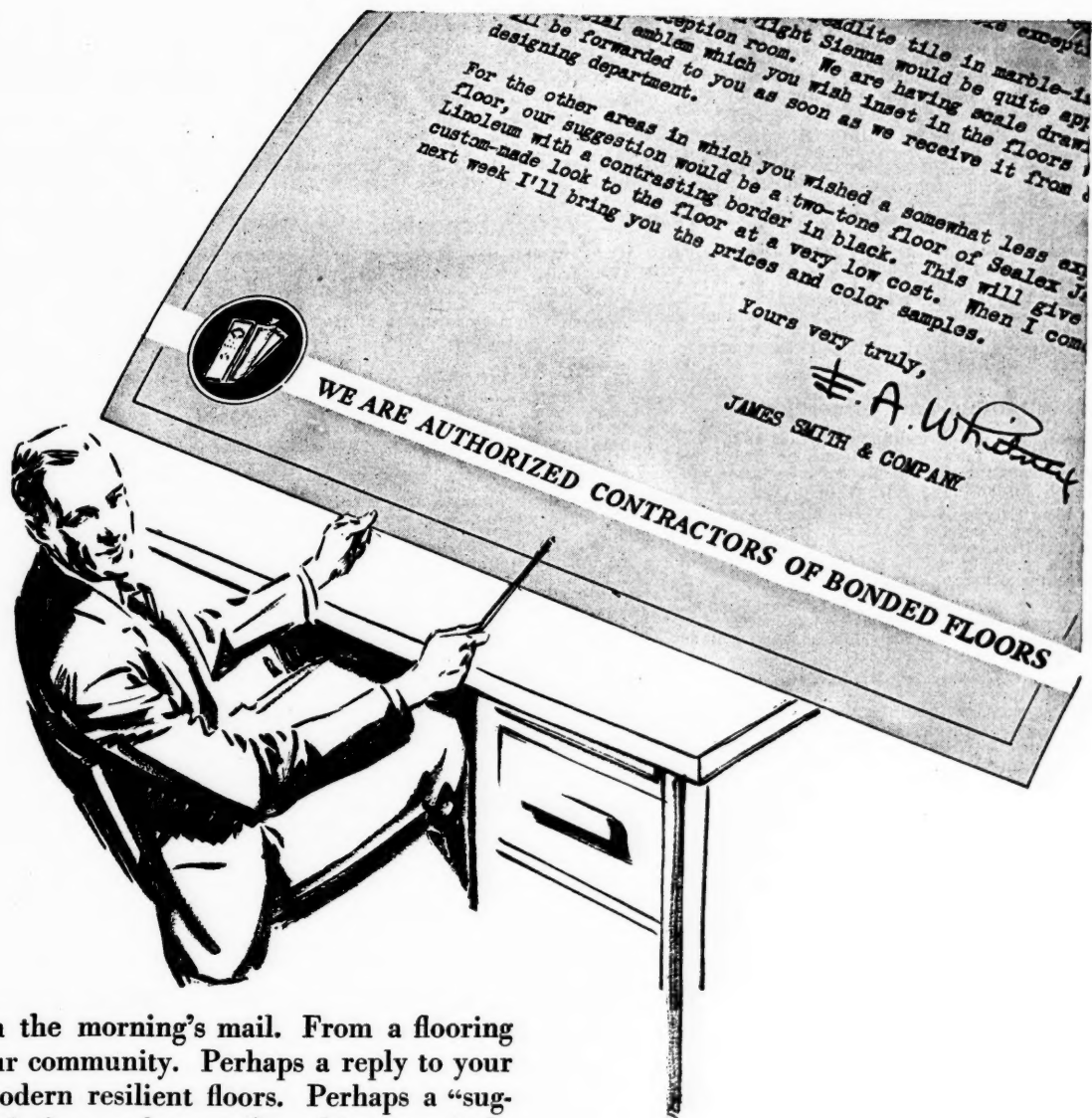
La., New Orleans—Fred White, 2212 Nashville St., erect single 2-story residence, Newcomb Blvd. near Freret St.; tile roof, sheet metal work, orna. iron, rein. steel; plans by Paul G. Charbonnet, 830 Union St.; ready for sub-bids in few days.

La., Opelousas—Following contractors estimating on \$10,000 residence for Allen Dezauche, bids Dec. 1: Homer Ventre; F. T. McKinney; L. L. Danel Lumber Co., all Opelousas; Clifford H. King, Prescott Lane; A. C. Stewart, 810 E. Boulevard, both Baton Rouge. 11-13

Md., Baltimore—Geo. J. Eckels, 2727 Strathmore Ave., plans 10 or 12 dwellings, Rosalie Ave., as demand calls for; frame, 2 stories, about 20x34 ft.; dwelling under construction.

Md., Baltimore—E. E. Morsberger, Augusta Ave., Irvington, erect 2-story brick residence, Glen Allen Drive, Hunting Ridge; Jos. Steinacker, Archt., 28 Stanford Ave., Catonsville; Century Corp., Contr., Morris Bldg.

Md., Baltimore—H. Frew Waidner, 3703 Liberty Heights Ave., erect \$10,000 residence, 319 St. Dunstan's Rd., Homeland; stucco;



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pressed asphalt tile, rubber tile and linoleum floors, steel sash, iron work, steel stairs with slate treads, slate, metal and built-up roofing, metal lath, stucco, elect. elevator; outside sewer, water, gas and steam distribution systems. 10-30

Va., Richmond—St. Phillips Hospital ready to excavate for \$127,000 nurses' home; brick, steel and conc., 6 stories, 40x115 ft., steel joists, conc. foundation, asphalt roof; Baskerville & Lambert, Archts., Central Natl. Bk. Bldg.; Davis Bros., Inc., Contrs., 15 N. Sixth St.; heating and elevator by owner; elect. work, Stringer Electric Co., 517 E. Main St.; plumbing, Kritzer & Harmon, 1502 W. Main St.; struct. steel and misc. iron, Richmond Structural Steel Co., 17th and Dock Sts.; steel joists and rein. steel, Truscon Steel Co., Virginia Bond and Mortgage Bldg.; excavating, J. H. Montague, 1221 Roane St. 11-13

Hotels and Apartments

Ga., Atlanta—Fitzhugh Knox & Son, Norris Bldg., rebuild apartment on Peachtree St. recently damaged by fire; 3 stories and work probably by day labor. 10-2

Ga., Columbus—J. W. Woodruff, 1814 Second Ave., convert residence, 3219 Hamilton Ave., into apartments; brick, comp. roof; work probably by day labor; Smith & Biggers, Archts., Murrah Bldg.

Miss., Gulfport—James Thomas remodel Thomas Bldg. for hotel, to be leased to S. J. Bertucci; work by day labor, started under supervision of Wade Kerr.

Miss., Jackson—C. N. Flowers soon start work on \$150,000, 4-story, 30-apartment on High St. near Capitol Bldg.; automatic elevator, steam heat; N. W. Overstreet, Archt., Standard Life Bldg.; owner builds.

Mo., St. Louis—A. E. Fitch, 4913 Reber Place, erect \$10,000, 2-story, 39x50 ft., brick tenement, 4943 Reber Place; slate roof, steam heat; J. Hartman, Archt.-Bldr., 6824 Virginia St.

Mo., St. Louis—J. A. Sarles, 4207 Labadie St., erect 2-story, 29x43 ft. brick tenement, 5235 Delor St.; comp. shingle roof, hot air heat; owner, Archt.-Bldr.

Mo., St. Louis—Sam Brown, 7533 Parkdale Ave., started work on 3-story and basement, 140x110 ft., brick, 36-apartment, Richmond Heights; comp. roof, hardwood floors, steam heat; Ben Shapiro, Archt., Synd. Trust Bldg.; owner builds by sub-contract.

Okla., Tulsa—Jas. J. Hempfling, 1612 S. Trenton St., started work on \$12,000, 2-story and basement, brick veneer apartment; owner builds by day labor.

Tenn., Nashville—Mackie Construction Co., F. E. Mackie, Pres., 615 S. 27th St., Birmingham, Ala., plans to begin work in next 30 days on \$150,000, 2-story, L-shape, 24-apartment building on Golf Club Lane.

Miscellaneous

D. C., Washington—Union Market Terminal, Phillips & Caldwell, Agents, 927 B St., N. W., sponsoring new trading center, let contract to Warren F. Brenizer Co., 1501 S. Capitol St., for construction of \$15,000, steel and conc. market building, Fifth, Sixth and Penn Sts., N. E., and Neal Place; first of series of units, eventually to provide accommodations for 700 to 800 farmers.

Fla., Miami—Tri-Club of Miami, W. H. Rickert, Pres., let contract to Everglades Construction Co., Hialeah, for completing Golf Park Clubhouse, Gratigny Road and 27th Ave., together with erection of first unit of Fishing Lodge at Card Sound on North end of Key Largo; estimated cost \$90,000; work has been started on Golf Park Clubhouse and expect to start work on Fishing Lodge next week; Ebsary Foundation Co., 1050 Biscayne Blvd., Miami, has contract for piling and swimming pool.

Ga., Jasper—Tate Mountain Estates, Col. Sam Tate, Pres., plans additions to dining room and several cottages at Connahaymee Lodge on Mount Burrell; stone and timber construction; DeFord Smith, Archt., Peachtree Bldg., Atlanta; probably day labor.

Md., Baltimore—Baltimore Country Club, Howard E. Boyce, Pres., Maryland Trust Bldg., let contract to John E. Marshall & Sons, 117 South St., for rebuilding structure recently damaged by fire at loss \$150,000; Wyatt & Nolting, Archts., Keyser Bldg. 10-23

Md., Baltimore—Maurice Runkle, 100 E. 42nd St., New York, and associates, reported, let contract to C. A. Williams & Co., same address, for one and two story, 275x400 ft., brick coliseum, Baltimore and Fremont Sts.; Van Rensselaer P. Saxe, Conslt. Engr., 217 N. Calvert St., Baltimore. 9-4

Okla., Oklahoma City—Holmes Home of Redeeming Love, Route 3, erect 2-story, 144x

40 ft., brick, stone and rein. conc. hospital; Campbell & Price, Contrs., 605½ W. Main St.; Layton, Hicks & Forsythe, Archts., Braniff Bldg. 11-13

Va., Wakefield—Wakefield Memorial Assn., Mrs. Harry Lee Rust, St. Pres., 2400 Sixteenth St., N. W., Washington, D. C., let contract at \$45,130 to J. R. Jones & Conquest, Inc., Central Natl. Bk. Bldg., Richmond, to rebuild birthplace of George Washington. 7-17

Schools

D. C., Washington—Dept. of Interior, John H. Edwards, Asst. Sec., 6117 Interior Bldg., let contract to Malatico Construction Co., 805 Fifth St., for Buildings Nos. 1, 2 and 3 of Women's Dormitory group at Howard University; A. I. Cassell, Archt. for University. 9-25

Fla., St. Augustine—State Bd. of Control, P. K. Yonge, Chmn., let contract to J. M. Pomar Sheet Metal Works for roofing of girls' dormitory at Florida School for Deaf and Blind; Rudolph Weaver, Archt., Peabody Hall, Gainesville.

Ga., Dallas—Paulding County Bd. of Education, C. A. Roberts, Supt., erect \$50,000, brick school; comp. roof, wood floors; owner builds.

Ky., Princeton—University of Kentucky, Dr. Frank L. McVey, Pres., Lexington, erecting (framing) \$10,000 service building at sub-experiment station including pavilion, seed storage, fruit storage, drying rooms, refrigerating rooms; one story and basement, 40x89 ft., brick veneer, comp. shingle roof, pine and conc. floors; J. B. Kelley, Engr., 126 Walker Ave., Lexington; Even Farmer, Contr., Madisonville, St., Princeton. See Want Section—Building Material and Equipment. 11-13

La., Hosston—Caddo Parish School Bd., E. W. Jones, Supt., Shreveport, let contract at \$78,844 to McMichael Construction Co., City Bank Bldg., Shreveport, for 2-story, brick and stone trim high school; Edw. F. Neild, Archt., City Bank Bldg., Shreveport. 11-6

La., New Orleans—Following sub-contracts awarded on Academic High School for Girls (piles driven for foundation) for which J. A. Petty & Sons, Inc., Audubon Bldg., have contract at \$525,985: Heating and plumbing, Dee Brown, American Bank Bldg.; pile driving, Thos. Carey, Pan American Bldg., both New Orleans; millwork, Baton Rouge Sash & Door Works, South Baton Rouge; struc. steel, Virginia Bridge & Iron Co., 3900 Eighth Ave., N., Birmingham, Ala.; E. A. Christy, Supvg. Archt. 10-23

Miss., Jackson—Bd. of Trustees, State School for Deaf, let contract as follows for repairs to buildings: General contract; S. L. Craft, Ellisville; sewer tile, Dye & Mullings, Columbia; painting, W. H. Maulding, 1216 Ellis Ave.; refrigeration, A. C. Riddick, E. Capitol St.; dormitory equipment, R. E. Kennington Co., E. Capitol St.; electric fixtures, Stuart Irby Co., 120 N. Congress St.; school equipment, Mississippi School Supply Co., 120 E. South St., all Jackson; kitchen equipment, Loubat Glassware & Cork Co., 510 Belleville St., New Orleans, La.; Frank P. Gates Co., Archts., Engrs., New Merchants Bank Bldg. 10-23

Mo., Clayton, St. Louis—Bd. of Education erecting \$200,000 Forsythe Grade School, Jackson and Maryland Aves.

Mo., St. Joseph—Bd. of Education, A. L. Loving, Sec., let contract at \$106,145 to Lawhon Construction Co., 505 Main St., for Hyde Elementary School in South St. Joseph; heating and plumbing, \$19,666, Turner & Cook Plumbing Co., 1201 Frederick St.; electric, \$2990, Harry C. Korns Electric Co., 1725 Frederick St.; Harry E. Wagenknecht, Archt., all St. Joseph; Wm. B. Ittner, Inc., Asso. Archt., Continental Life Bldg., St. Louis. 11-6

Mo., St. Louis—Fontbonne College, Wydown and Big Bend Blvd., care Sisters of St. Joseph, excavating for 1-story, 50x100 ft., granite cafeteria; Humes-Deal Co., Contr., Arcade Bldg.; Aegerter & Bailey, Archts., Ry. Exchange Bldg.

N. C., Leaksville—Bd. of School Trustees let contract at \$26,618 to C. A. Morrison, Shelby, for Lakeside Graded School; 12 rooms; plans by W. C. Holleman, Jr., American Bank Bldg., Greensboro, and James W. Hopper, Leaksville. 10-16

S. C., Greenville—Bd. of Education has permit for \$22,000, 1-story, brick, veneer, 8-room Poinsett School on Hale St.; auditorium to seat 300 pupils; Cox & Hodgins, Contrs., Emacee Bldg.; Haskell H. Martin, Archt., 21½ W. McBee St.

S. C., Charleston—The Citadel, John P. Thomas, Chmn., let contract at \$123,650 to Gallivan Construction Co., Gallivan Bldg., Greenville, for administration building; 5-

stories, brick, tile and stucco, 250 ft. long, central tower 75 ft. square with 2 wings 35x90 ft., 3-stories; tar and gravel roof, wood floors; plans by Lockwood Greene Engineers, Inc., Spartanburg. 11-13

Stores

Ala., Mobile—National Bellas Hess Co., Inc., F. F. Henry, Local Mgr., started work on improvements to building, 211 Dauphin St.; Goode Construction Co., Contr., 11 E. Fifth St., Charlotte, N. C.

La., New Orleans—Peter Jung, Jung Hotel, erect \$15,000, 32x110 ft., brick, fireproof building, 1416 Cleveland Ave.; J. A. Petty & Sons, Contrs., Audubon Bldg.; Theard & Mathews, Archts., Balter Bldg.

Md., Dundalk, Baltimore—E. Eyring & Sons, 808 S. Conkling St., Baltimore, erect 1-story brick store; owner, Archt.-Bldr.; ready for sub-bids in Spring.

Mo., St. Louis—W. Federer, 2610 Gravois Ave., remodel 2-story store and office building, 2600-06 Gravois Ave.; \$29,000; brick; C. B. McCormack & Son, Bldrs., Columbia Bldg.; C. Federer, Archt., 2610 Gravois Ave.

Theatres

Okla., Blackwell—W. A. Weaver, Tulsa, P. R. Isley, 208 W. 31st St., and W. A. Moran, Oklahoma City, started work on remodeling Regent Theater; extend to alley; seating capacity 500.

Tex., Pampa—Griffith Bros. let contract to J. T. Glover for \$125,000, 3-story, brick, rein. conc. and steel theater; seat 1150 people. 9-25

Warehouses

Ga., Atlanta—H. T. Hagan, 18 Collier Road, let contract to C. R. Justl, Marietta Bldg., for 1-story, metal building, Spring St. and Southern R. R.

Tenn., Memphis—Virginia-Carolina Chemical Co., Poplar Ave. and Collins St., reported, let contract to Meers & Wallenta, 63 S. Third St., Memphis, for 2 warehouses Memphis, and Jackson, Miss.; cost \$10,000 each.

Tex., Harlingen—Hodge Produce Co. started work on warehouse, N. Commerce and Washington Sts.

Christmas Club Distribution

Seventy-nine million three hundred thousand dollars will be contributed by the 16 Southern States and the District of Columbia out of a total of \$632,000,000 to be distributed to about 11,000,000 members of Christmas clubs throughout the country, according to estimates by Herbert F. Rawll of the National Banc-service Corporation, New York. These clubs were conducted by more than 8000 banking institutions and other organizations.

This aggregate is described as a record distribution. The average amount received by each member will be \$54.60, compared with \$59.50 last year, the aggregate record being established by a larger number of participants. Checks range from \$25 to \$1000 each, and cover deposits for 50 weeks.

The amounts in the Southern States and the District of Columbia are as follows: Missouri, \$7,900,000; Maryland, \$9,440,000; District of Columbia, \$8,600,000; Virginia, \$7,940,000; West Virginia, \$4,300,000; North Carolina, \$2,780,000; South Carolina, \$2,560,000; Georgia, \$3,320,000; Florida, \$960,000; Kentucky, \$4,560,000; Tennessee, \$5,100,000; Alabama, \$3,860,000; Mississippi, \$1,840,000; Arkansas, \$1,700,000; Louisiana, \$9,400,000; Oklahoma, \$1,100,000; Texas, \$3,940,000.

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WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Machinery and Supplies

Channelling Machines.—D. C. Elphinstone, (Mch. Dealer), Inc., 120 S. Calvert St., Baltimore, Md.—Wants prices and data on 2 single head steam or air driven channelling machines.

C. K. Dodd, Punta Gorda, Fla.—Wants prices and data at once on following:

- (1) Canning Plant Equipment
- (2) Cold Storage Equipment
- (3) Jelly Making Equipment.

Derricks and Hoists.—D. C. Elphinstone, (Mch. Dealer), Inc., 120 S. Calvert St., Baltimore, Md.—Wants prices and data on three 10-ton steel guy derricks, 100-ft. boom to 120-ft. mast; also three 7½x10 double drum steam hoists.

Dump Cars.—Equitable Equipment Co., Inc., Elysian Fields Ave. and Florida Walk, New Orleans, La.—Wants prices and data on thirty 4 or 5-yd., 2 way, 36-in. gauge, used dump cars; state whether sills are wood or steel draft.

Engine (Diesel) and Generator.—H. Levey, Glendon, N. C.—Wants prices and data on 200 to 250-h. p. Diesel engine and generator, complete, used, or steam plant complete, good condition.

Flour Mill Machinery.—W. P. Boshier, Bowlers Wharf, Va.—Wants prices and data on flour mill machinery.

Battery Machinery Co., Rome, Ga.—Wants prices and data on following:

- (1) Lathe—two, 30 in., back knife, Whitney, used
- (2) Moulder (Inside)—16 in.

J. W. Donaldson, Box 183, Dublin, Ga.—Wants prices and data on following:

- (1) Doughnut Machines
- (2) Peanut Roasting Machines
- (3) Potato Chip Machines.

Nantahala Co., Andrews, N. C.—Wants prices and data on following:

- (1) Motor—75 h. p., 220 or 440 volt, 3 phase, 60 cycle, 900 to 600 r. p. m., complete with starter
- (2) Pumps—motor driven centrifugal, capable of handling 1000 g. p. against 25-ft. head motor characteristics same as above; small motor driven centrifugal, capable of handling 125 g. p. m. against 25-ft. head.

Galvanizing Plant.—Sherman Machine and Iron Works, 36 E. Main St., Oklahoma City, Okla.—Wants data and prices on installation of galvanizing plant in connection with machine works.

Mining Equipment.—Shirley D. Mining Co., Stotts City, Mo.—Wants following:

- (1) Belting
- (2) Rolls and Tromble Screen.

Shirley D. Mining Co., Stotts City, Mo., developing mine and wants prices on following:

- (1) Boiler—150 h. p.
- (2) Oil Engine—100 h. p.

W. M. Smith & Co. (Mch. Dealer), 4601 First Ave., North, Birmingham, Ala.—Wants prices and data on following:

- (1) Clamshell Bucket—1½ yd., used
- (2) Generator—1000 kw., 60 cycle, 3 phase, 2200 volts, 150 lb. steam pressure, used
- (3) Magnet (Scrap)—42 in. or larger
- (4) Milling Machine, used.

Saw Mill.—Black River Lumber Co., P. O. Box 467, Poplar Bluff, Mo.—Wants 6 or 7 ft. used band saw mill complete.

Tomlin-Harris Machine Co., P. O. Box 417, Cordele, Ga.—Wants prices and data on following:

- (1) Arc Welding Outfit—with and without gasoline engine drive, used
- (2) Cupola (Foundry)—to line to 30 inches diam., good condition used preferred.

Water Works.—Frank A. Phelps, Cuba, Mo., Contr., wants prices on following for city water works:

- (1) Pump—no relay tank, continuous connection.
- (2) Tank and Tower—50,000 gal. tank, 65 ft. tower; knocked down and also erected.

Miscellaneous

Time Clocks.—Shenandoah Milling Co., Inc., Shenandoah, Va.—Wants prices and data on time clocks.

Toys.—Mrs. Gladys Harris, 1019 Nebraska Ave., Weslaco, Tex.—Wants to contract with firm in position to manufacture mechanical airplane toys.

Building Material and Equipment

Bradbury & Mohler, Contrs., Chandler Bldg., Washington, D. C.—wants prices on following for \$70,000 dwelling:

- Cast Stone
- Electric Refrigerators
- Flooring—hardwood, linoleum, tile
- Incinerator
- Limestone
- Marble
- Roofing—slate
- Steel Sash
- Tile—hollow.

Even Farmer, Contr., Madisonville St., Princeton, Ky., wants prices on following for \$10,000 service building at sub-experiment station, Princeton:

- Cork (insulating)
- Tile.

J. B. Whitener, Maiden, N. C., wants prices on following for \$17,000 school:

- Metal Ceilings
- Roofing—built-up.

Morley Construction Co., 1643 Belleview St., Kansas City, Mo., wants prices on following for officers' quarters, U. S. Veterans Hospital, Excelsior Springs, Mo.:

- Cast Stone
- Flooring—tile
- Roofing—slate
- Tile—hollow.

Bids Asked

Armature Machine.—See Miscellaneous Machinery, etc.

Automobiles.—Comms., District of Columbia, Washington, D. C.—Bids Nov. 24 for 4 automobiles for Water Dept.

Bridge.—Memphis, Tenn. See Bridges, Culverts and Viaducts.

Bridge.—Jackson, Miss. See Construction News—Bridges, Culverts and Viaducts.

Building Material, etc.—Dept of Penal Institutions, Jefferson City, Mo.—Bids Dec. 2 for following materials for intermediate reformatory: Struc. steel and iron work, radial brick or reinforced tile smoke stack, electric service elevator, millwork, tubular metal doors, frames and steel bar vent grilles, kalamain doors and frames, metal toilet stall and shower partitions, comp. roofing, gypsum roof tiles, asbestos roofing shingles, glass and putty, sheet metal work, cell doors, bunks, etc., finishing hardware, exterior and interior brick and tile trim, plumbing materials, heating materials, electrical materials, refrigerating equipment.

Bridges.—State of Georgia—Bids for 17 bridges. See Construction News—Roads, Streets and Paving.

Chassis (Truck).—Ben M. Sawyer, Ch. Highway Commr., Columbia, S. C.—Bids Nov. 24 for 34 Chevrolet truck chassis with Chevrolet closed cabs; 34 Ford truck chassis with Ford closed cabs.

Cheesecloth.—Quartermaster, Marine Corps, Washington, D. C.—Bids Nov. 24 for 2000 yd. 36-in. cheesecloth.

Conveyor and Elevator.—City of Houston, Tex.—Bids Nov. 28 for furnishing f. o. b. Houston, bucket elevator and small screw conveyors to be used in connection with screening equipment at North Side Sewage treatment plant.

Dispensing Equipment.—Comms., District of Columbia, Washington, D. C.—Bids Nov. 28 for oil dispensing equipment, including 2 gasoline dispensing units, 4 65-gal. capacity steel tanks and 1 air operated oil fountain.

Drills.—See Miscellaneous Machinery, etc.

Drills, Grinders, Pliers and Nippers.—Bureau of Supplies and Accounts, Navy

Dept., Washington, D. C.—Bids Dec. 2 for portable electric drills and grinders, pliers and nippers.

Elevator.—Supvg. Archt., Washington, D. C.—Bids Dec. 3 for installing complete elevator plant in U. S. post office, courthouse, etc., Clarksburg, W. Va.

Fuel Oil.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Dec. 3 for fuel oil (for period beginning Jan. 1, 1931, and ending Dec. 31, 1931), Sch. 2606.

Gasoline.—Pur. and Contracting Officer, Quartermaster Corps, Ft. Eustis, Va.—Bids Nov. 24 for 36,000 gal. motor gasoline.

Gasoline.—Quartermaster, Fort Hoyle, Md.—Bids Nov. 25 for 21,000 gal. gasoline.

Grate Bars, etc.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Nov. 24 for 8 sets grate bars and 1 boiler plate, delivery Quantico, Va.

Heaters.—Pur. Agt., District Government, Washington, D. C.—Bids Nov. 24 for 6 electric heaters for industrial heating, D. C. penal institute.

I-beams.—Shelby County Comms., E. W. Hale, Chmn., Memphis, Tenn.—Bids Nov. 24 for 128 pieces 7-in. steel I-beams, 34 ft. 11½ in. long; 12 pieces 7-in. steel I-beams, 34 ft. and 11½ in. long.

Lathes.—See Miscellaneous Machinery, etc.

Miscellaneous.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Dec. 5 for following, Sch. 2607:

Steel doors, steel windows, window operating devices, struc. steel, galv. corrugated metal roofing and galv. plain metal ridge roll.

Miscellaneous Machinery, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Dec. 2 for carbon and high speed twist drills, engine lathe, motor drill, motor driven nibbling machine, bench driven geared head single spindle vertical lathes and adapter castings, motor driven motor driven heavy duty type armature machine; bids Dec. 9 for automatic screw machines.

Meters, etc.—Constructing Quartermaster, Randolph Field, Tex.—Bids Nov. 28 for electric watt-hour meters and accessories.

Miscellaneous Machinery.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Nov. 25 for motor driven selective head engine lathe; motor driven upright hydraulic oil feed drill, motor driven wire feed screw machine, motor driven hacksaw machines; bids Dec. 2 for motor driven steel forming press, complete.

Pipe (Cast Iron).—See Sewer Construction.

Pipe (Galvanized Iron).—See Sewer Construction.

Pipe (Terra Cotta).—See Sewer Construction.

Polish.—Quartermaster, Marine Corps, Washington, D. C.—Bids Nov. 24 for 200 quarts furniture polish.

Roads.—State of Georgia—Bids for 11 roads. See Construction News—Roads, Streets and Paving.

Road.—Maryland. See Construction News—Roads, Streets and Paving.

Road.—Fayette, Miss. See Construction News—Roads, Streets and Paving.

Road.—State Highway Dept., Dover, Del.—Bids Dec. 16 on 3 contracts: Cont. 81A—800 lin. ft. wire cable guard rail, 6 dead men for same; Cont. 144A—0.30 mi. fill (Marshallton Cutoff), 850 cu. yd. excavation, 14,000 cu. yd. borrow, 500 cu. yd. Class A conc., 15,000 lb. reinforcement, 5500 lb. struc. steel and castings, 1500 lb. catch basin castings, 1700 lin. ft. timber piling, 3000 ft. b. m. sheet piling, 44 lin. ft. 12-in. c. i. pipe, 150 lin. ft. 24-in. r. c. pipe; Cont. 169—4.911 mi., St. Georges Drawers (Dual Highway, 86,000 cu. yd. excavation, 22,000 cu. yd. borrow, 1000 tons broken stone base course, 13,300 cu. yd. cement conc. pavement, 7000 lin. ft. ¾-in. premoulded bituminous exp. joint, 6000 sq. ft. cement conc. sidewalk, 200 tons Aimesite asphalt surfacing course, 400 cu. yd. Class A gratings castings, 1000 lin. ft. 12 and 12 and

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Sewer Construction.—County Commrs., Baltimore County, Towson, Md. Bids Dec. 1 for excavating trenches and for furnishing and laying vit. pipe sewers and appurtenances certain streets and rights-of-way in West Catonsville; Cont. No. 22-S, work includes: 14,400 ft. of 8-in., 1340 ft. of 15-in., 3400 ft. of 18-in., 1750 ft. of 24-in., t. c. sewer; 3733 t. c. house connections; brick manholes, etc.; information on application at office of Ch. Engr. Baltimore County Metropolitan Dist., Towson.

Sewer Construction.—Comsn. Council, J. L. Voorhies, Const. Engr., Baton Rouge, La.—Bids Dec. 16 for furnishing labor, materials and equipment for 22 miles sanitary sewers, from 8-in. to 30-in.

Sewer Construction.—Spartanburg Metropolitan Sub-District "B", Spartanburg, S. C., U. M. Kilgo, Chmn., Committee, The Harwood Beebe Co., Engrs., Montgomery Bldg., Spartanburg—Bids Dec. 16 for construction of sewer system and water mains; work consists of approximately 6.3 miles of 8-in. and 10-in. sewer mains, 103 manholes, 6 flush tanks, 1.6 miles of 6-in. and 8-in. c. i. water mains; 3 miles galv. iron pipe; 17 hydrants and all appurtenances.

Sewer Construction.—Sewerage and Water Bd., New Orleans, La., A. G. Moffett, Sec.—Bids Dec. 30 for extension to Drainage Pumping Station, No. 7, extension to present pressed brick building, all foundation, suction and discharge basins, etc.; information Room 401, Sewerage and Water Bd. Bldg.

Sewer Construction.—Dist. Commrs. Washington, D. C.—Bids Dec. 19 for 4435 ft. of sewer 10-in. to 24-in. in diam.

Switchboard.—Ch. Bureau of Yards and Docks, Navy Dept., Washington, D. C.—Bids Nov. 26 for switchboard for central power plant at marine barracks, Parris Island, S. C.

Tubes and Plugs.—U. S. Engr. Office, Mobile, Ala.—Bids Nov. 24 for 201 seamless steel boiler tubes and 2 fusible plugs.

Water Reservoir.—City of Burlington, N. C., A. C. Linberg, Const. Engr.—Receives bids Dec. 1 from cement gun contractors for patching and waterproofing old disintegrated conc. reservoir, capacity 470,000 gals.; reservoir will be empty Monday, Nov. 24, for inspection.

Water Works.—See Sewer Construction.

X-Ray Machine.—Jackson County Supvrs., Fred Taylor, Clk., Pascagoula, Miss.—Bids Dec. 1 for X-ray machine.

X-Ray Supplies.—Supt., St. Elizabeth's Hospital, Washington, D. C.—Bids Nov. 28 for X-ray supplies.

Milwaukee Consultant Office.

A consulting engineering office has been opened in Milwaukee, Wis., by Robert Cramer, for seven years connected with the Sewerage Commission of Milwaukee, first as a member, then as chief engineer and now as consultant. The new office will specialize in sewage disposal plants and sewage systems, utilization and disposal of industrial wastes, power plants, design, construction, operation, laboratory service, valuations and reports.

Lectures on Special Steels.

An announcement from Joseph T. Ryerson & Son, Inc., Chicago, states that G. Van Dyke, manager of the special steels department has recently delivered lectures at various points throughout the country on alloy steels, tool steels, and stainless steels. Non-technical in character, both lecture and demonstration have been designed to be clearly understandable by superintendents, shop foremen, welders and others who may or may not have had technical training.

American Bemberg Representatives.

Because of increased business opportunities in the South, the American Bemberg Corporation, New York, has appointed Charles J. Hall, Jr., to its sales staff for selling yarns in Tennessee, Georgia, Alabama and Mississippi. Headquarters will be in the Provident Building, Chattanooga, Tenn. Gordon Hope, who has covered this territory as well as Virginia, North Carolina and South Carolina, will now confine his work to the latter three states, retaining offices in the Greensboro Bank and Trust Building, Greensboro, N. C.

Employees' Relief Plan.

Employees of the Inland Steel Company, Chicago, have evolved a plan for the relief of unemployed fellow workers. Work has been prorated among the largest number of employees, and those retained have voluntarily pledged from 2 to 5 per cent of their earnings to a relief fund. Employees earning less than \$125 a month have not been asked to contribute, except single men with no dependents. Expenses incurred in distribution of the fund will be borne by executives of the company.

Engineers Public Service Earnings.

Gross earnings of the Engineers Public Service Co. and constituent companies for September, 1930 totaled \$4,440,243 as compared with \$4,325,541 for September, 1929. For the 12 months ending September 30, gross earnings were \$52,792,509, an increase of \$5,538,634 over the similar period of 1929. Net operating revenue for the 12-month period showed an increase of \$2,510,300 over the \$10,937,217 for the previous annual period, net operating revenue for September, 1930 being \$1,794,340, or a decrease of \$47,687 from the figure for September, 1929. Constituent companies include: Virginia Electric and Power Co., Gulf States Utilities Co., Western Public Service Co., Eastern Texas Electric Co., Key West Electric Co., Puget Sound Power & Light Co., El Paso Electric Co., Savannah Electric and Power Co., Baton Rouge Electric Co., Ponce Electric Co., and the Louisiana Steam Products, Inc.

(Continued on page 64)

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Large Size Mono-Cast Pipe.

The Mono-Cast centrifugal pipe shop of the American Cast Iron Pipe Co., Birmingham, is expected to begin producing pipe on a commercial basis by January 1. Fireproof and modern in construction, the new shop has a potential capacity of 200 tons of large size centrifugally cast iron per shift and can be operated 24 hours per day. Since beginning production of small size Mono-Cast pipe, more than 2000 miles have been put into service. The new plant will make this type of pipe in larger sizes: 14-, 16-, 18-, 20-, and 24-inch. The pipe will be in 16-foot lengths, bell and spigot type with a bead cast on the spigot end.

Heating and Air Conditioning Companies Merge.

Merger has been announced of the Carrier Engineering Corporation, Newark, N. J.; Brunswick-Kroeschell Company, New Brunswick, N. J., and Chicago; and the York Heating & Ventilating Corporation, Philadelphia. These companies are among the largest in the air conditioning, refrigerating and unit heating and ventilating industries, and are said to have assets of about \$15,000,000. The consolidated company will be equipped to provide a variety of specified atmospheric conditions for hotels, industrial plants and other commercial buildings.

Increased Earnings.

Combined gross earnings of the Standard Gas and Electric Company, Chicago, and its subsidiary and affiliated companies for 12 months ended September 30, 1930, amounted to \$154,641,424 as compared with \$152,367,731 for the previous year, while net earnings reached a total of \$73,990,621 for the year as against \$72,832,595 for the year ended September 30, 1929. These figures indicate an increase of approximately 1.49 per cent in gross earnings and an increase of about 1.58 per cent in the net.

Film on Refractory Manufacture.

The Harbison-Walker Refractories Co., Pittsburgh, Pa., has completed a 5000-foot motion picture illustrating modern methods employed in the manufacture of refractories, from the mining of the raw materials to loading and shipping the finished product. The film is available, without cost, to technical societies, engineering organizations, industrial organizations, universities, colleges, technical schools and research laboratories.

Bristol, R. I., Bridge Design Commended.

A bronze plaque has been placed by the American Institute of Steel Construction on the Mt. Hope Bridge at Bristol, R. I., to designate the "most beautiful long span bridge" constructed during the past year. The structure was designed by Robinson & Steinman, New York engineers, and constructed by the McClintic-Marshall Co., Pittsburgh.

Bolam Joins Sherman Staff.

Austen Bolam, consultant in publicity and market research and technical and industrial writer, has become associated with the research division of the Sherman Corporation, business engineers, who recently moved their headquarters from Boston to New York.

Remove Atlanta Office.

The Thew Shovel Company and the Universal Crane Company, Lorain, Ohio, announce the removal of their Atlanta sales offices to 1513-1514 William Oliver Building, Five Points, Atlanta.

Addison H. Beale.

The A. M. Byers Co., Pittsburgh, announce the death October 28 of Addison H. Beale, president. Mr. Beale was prominently identified with the iron and steel industry.

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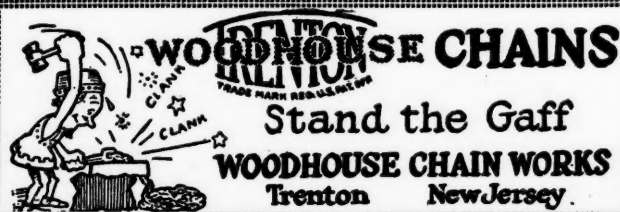
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(Continued from page 62)

Chain Belt General Manager.

C. F. Messinger, vice-president of the Chain Belt Co., Chicago, has been elected general manager of the company. Connected with the company since 1911, Mr. Messinger has been serving as vice-president and general sales manager for the past ten years.

Eastern Texas Electric Financing

The board of directors of the Eastern Texas Electric Company, a subsidiary of Engineers Public Service Company, New York, has called for redemption on January 1, 1931, the entire outstanding issue of \$2,425,600 par value, 7 per cent preferred Series A stock at \$110 per share and accumulated dividends, \$1.75 per share. It is stated that the Eastern Texas Company has no immediate plan for public financing and the call will be met with funds now in the treasury of the Engineers Company.

Trade Literature

Grinnell Apparatus.—The Grinnell Company, Providence, R. I., with offices in principal cities, has issued two 4-page folders, on the Unit-Cooler and on Liquid Level Control. The Unit-Cooler, a new development constructed especially for refrigeration, can be used with direct expansion ammonia, brine or other refrigerants. The Liquid Level Control automatically holds refrigeration liquids at a predetermined level in any type of evaporator and can be used with ice making tanks, brine coolers, direct expansion milk coolers, direct expansion pipe coils and for general application, according to the company.

Sewage Pumps.—Open-shaft non-clogging pumps for sewage disposal plants are shown in Bulletin 126, issued by the Chicago Pump Co., Chicago. Sewage treatment as a modern practice and the part the centrifugal pump plays in this operation are described in the bulletin, which contains illustrations and blue print reproductions of layouts for the non-clogging pumps. Application of the "double universal joint" on Chicago open shaft vertical pumps, as well as the "lubri-saver," is featured. A second bulletin will deal with closed shaft non-clogging pumps.

Fluid Meters.—In a newly issued Bulletin No. 37 dealing with mechanically operated fluid meters, the Bailey Meter Co., Cleveland, Ohio, describes and illustrates various types of such metering devices and auxiliary equipment incident to their installation. Plates of colored meter charts show results obtained by application of Bailey meters to various processes, while other illustrations are devoted to orifice and flow nozzle location, calibration, pulsating flow, special conditions and applications.

Red Fog.—Under this title the Caxton Printers, Ltd., Caldwell, Idaho, have issued a volume by Bruce Harper, in which he exposes, as he sees them, the "insidious methods employed by Bolsheviks to undermine the patriotism of the youth of America by the spread of their propaganda in schools and clubs." The volume is divided into books 1 and 2, the theme carrying a plot.

Power Shovel.—Bulletin No. D-1203 published by the Bucyrus-Erie Co., South Milwaukee, Wis., treats of the Bucyrus-Erie 120-B, 4-yard electric-steam revolving shovel. Actual applications of this quarry and mining shovel, as well as some of its working parts are illustrated, and text matter gives descriptive facts.

Screws.—"Fastenings," is the title of an attractive booklet issued by the Parker-Kalon Corp., New York, discussing hardened metallic drive screws. Among industries cited as advantageously using this type of screw are the automobile, refrigerator, partition, gasoline and oil dispensing equipment industries; also aircraft, radio, electric range and other manufacturing plants.

Centrifugal Pumps.—The "SSU" type of centrifugal pump is the subject of Bulletin 1647 of the Allis-Chalmers Manufacturing Co., Milwaukee, Wis. In addition to describing this small pumping unit and giving illustrations of its actual application, the new bulletin contains sectional views, graphs and tables on the unit's capacity and results obtained through its operation.

Mining Machinery, etc.—Bulletin No. 4000, superseding Bulletin No. 3000, a general catalog, has been issued by the Traylor Engineering and Manufacturing Company, Allentown, Pa., as a general catalog. The illustrated bulletin presents a comprehensive description of Traylor machines, including mining, smelting, refining and concentrating, lime and cement manufacturing, crushing, screening, washing and briquetting machines.

Corliss Engines.—The Mattoon Engine Works, Mattoon, Ill., successor to Chuse Engine Manufacturing Company, has issued Bulletin No. 110 devoted to the Chuse Non-Releasing Corliss engines, adapted to many types of industries and public institutions. Also the company is distributing a leaflet on electrically operated synchronizing devices which may be applied to all Chuse Uri-flow and Corliss engines using the centrifugal-inertia type of governor.

Statistical Abstract.—The 1930 number of the Statistical Abstract of the United States has been issued by the Department of Commerce. It represents a digest of data collected by all statistical agencies of the National Government, as well as those of a considerable number of private agencies of the several States. Main subjects covered are: Area and Population; Agriculture, Manufacturing, Commerce.

Waterpower.—National aspects of waterpower development are discussed by a special committee of 12 members active in the fields of finance, engineering, education, journalism, business and agriculture, in a report issued by the Chamber of Commerce of the United States, Washington, D. C. The book is a compact, non-technical study of waterpower development, particularly those features of a political nature involving the federal and state governments. While the textual matter is of chief interest to the layman, it at the same time is valuable to experts, executives and officials having to do with waterpower. The report is followed by numerous appendices, containing tabulations of statistical matter, charts and maps, and excerpts from reports and law, references to which are made throughout the report proper.

Cooperatives.—Methods for setting up local cooperative marketing associations for fruits and vegetables are set forth by the Federal Farm Board in Bulletin No. 1, obtainable from the board's headquarters, Washington, D. C. The essential preliminary steps are said to be: (1) Collect the facts; (2) develop a sound organization plan; (3) employ business methods in putting the organization across. Financing, marketing agreement, incorporation, procedure following receipt of charter, and meeting requirements of the Capper-Volstead law, are discussed.

Metal Buildings.—A new "General Building Catalog" has been issued by the Maryland Metal Building Co., Baltimore, illustrating many actual applications of the Maryland metal building for manufacturing, field office, industrial storage, railroad operation, industrial garage, and airport purpose. In addition, the booklet gives blue-print reproductions of construction details of the buildings, information about Lyonnore metal from which the buildings are manufactured, general specifications and brief facts about development of the steel building.

Water Purification.—A bulletin, "Chemical and Mechanical Utilization of Activated Carbon in Water Purification" has been published by the International Filter Co., Chicago. Dealing with "Hydrodareo," the special brand of carbon sold by the company, the bulletin discusses merits of the product in removing organic tastes and odors, free chlorine, organic coloring matter, and separating and removing iron from water supplies. The underlying principles to be followed for design and operation of equipment for using activated carbon are also given.

Chairman of Aviation Group

Jacksonville, Fla.—George H. Baldwin, president of the Jacksonville Chamber of Commerce, has been selected by the Chamber of Commerce of the United States as chairman of the aviation group during its Southeastern States Regional Traffic and Aviation Conference to be held in Atlanta November 19 and 20. According to the Florida State Chamber of Commerce, the conference will cover Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia, and its purpose is to promote a general discussion by communities and organizations interested in traffic and aeronautical problems. Col. W. M. Wiley, Sharples, W. Va., vice president of the Southeastern Division of the National Chamber of Commerce, will preside.

Architect for Post Office

Fort Worth, Texas—Wyatt C. Hedrick, Inc., local architectural organization, has been selected to design the Fort Worth post office and the Federal Building which will be later erected. The postoffice will involve an expenditure of \$1,245,000, exclusive of cost of the site.

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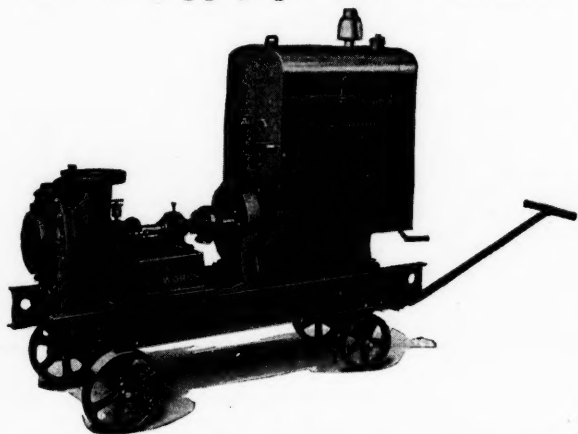
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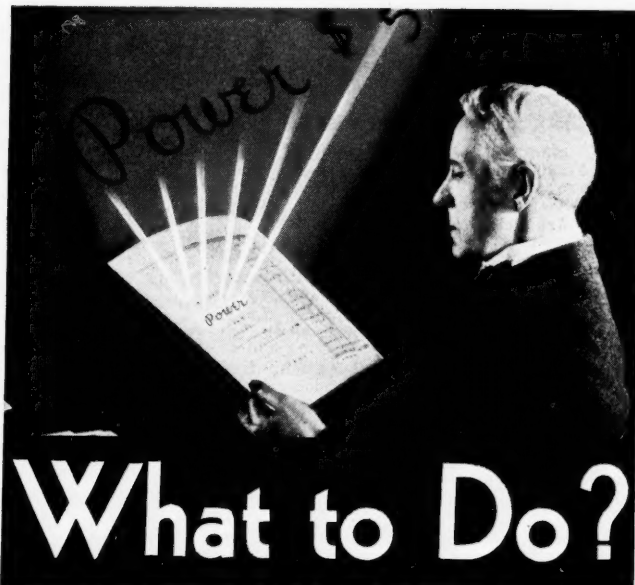


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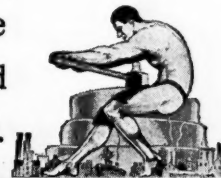
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FINANCIAL NEWS

Bond Issues Proposed

Ala., Mobile—City, S. H. Hendrix, Clk., voted \$25,000 bonds: \$250,000, sanitary sewer extension; \$200,000, water works extension; \$75,000, airport improvement. 10-30

Ark., Arkadelphia—Clark County, Geo. H. Wells, County Judge, voted \$50,000 jail bonds. 10-23

Ark., Murfreesboro—City, reported, voted \$60,000 bonds to erect courthouse and jail.

Ark., Texarkana—Miller County, J. J. Sewell, Judge, voted \$150,000 jail bonds. 10-23

Fla., Dover—Dover School Dist. may vote on \$45,000 bonds for erecting school.

Ky., Somerset—Pulaski County sold \$280,000, 4½%, \$1000 denom. road and bridge bonds to Seipp, Princell & Co., Chicago.

Ky., Winchester—City, Miss Lindsey Faulkner, Clk., opens bids Del. 5 for \$180,000 5% sewer system bonds. 10-16

Ky., Lexington—City, Jas. J. O'Brien, Mayor, voted \$250,000, 4½% auditorium bonds. 10-16

Ky., Newport—City voted \$100,000 grade crossing elimination bonds. 9-25

La., Baton Rouge—State Highway Comsn., O. K. Allen, Chmn., opens bids Dec. 27 for \$15,000,000, 4½% highway bonds. 11-13

La., Colfax—Town Council postponed election on \$40,000 bonds for electric system and \$25,000 for extending and improving present water works system. 10-23

La., Harrisonburg—Catahoula Parish School Bd., E. W. Dayton, Pres., opens bids Nov. 25 for \$75,000 bonds for building school at Sicily Island.

La., New Orleans—Orleans Levee Bd., Charles J. Donner, Sec., plans selling \$2,000,000 Lake Ponchartrain improvement bonds for improving and raising lake levees and lengthening sea wall.

La., Independence—City, Mayor and Bd. of Aldermen, Ivy N. Stafford, Town Clk., opens bids Dec. 3 for \$10,000 Sewerage Dist. No. 1 bonds.

La., Rayville—Richland Parish Police Jury opens bids Dec. 9 for \$50,000, 6% road bonds on Sub-road Dist. No. 7.

La., Hahnville—St. Charles Parish Police Jury voted \$100,000 jail bonds. 10-2

La., Ville Platte—Town, Geo. L. Fontenot, Mayor, opens bids Dec. 2 for \$26,000, 6% improvement bonds.

Md., Hagerstown—City plans issuing \$350,000 bonds for sewer construction.

Miss., Holly Springs—Marshall County voted \$35,000 separate road dist. conds. 10-30

Mo., Clarkton—City, A. V. Rice, Mayor, voted \$20,000 water works bonds. 10-2

Mo., Jefferson City—State Bd. of Fund Comms., sell \$5,000,000 road bonds Dec. 4.

N. C., Fayetteville—City, J. R. Harrison, Mayor, may issue \$50,000 for resurfacing all paved streets.

Okla., Cushing—City, S. P. Alles, Chmn., Bd. of City Comms., called election for Dec. 2 on \$300,000 light and power plant bonds.

Okla., Oklahoma City—City, M. Peshek, Jr., Clk., reported, votes soon on \$2,450,000 bonds: Main storm sewers, \$1,250,000; sewage disposal plant, \$1,050,000; main sanitary sewers, \$150,000. 9-18

Okla., Oklahoma City—State of Oklahoma, Graves Leeper, Secretary of State, did not vote on \$15,000,000 highway notes. (Recently noted, reported, votes Nov. 4). 10-23

Okla., Tulsa—Tulsa County voted \$500,000 bonds for Tulsa State Fair. 10-9

S. C., Columbia—State of South Carolina, John G. Richards, Governor, may sell \$10,000,000 highway certificates of indebtedness.

S. C., Laurens—Laurens County voted \$50,000 bonds for erecting hospital.

Tenn., Bristol—Mayor and City Comms. passed ordinance providing for issuing \$16,000 school bonds.

Tenn., Nashville—City Council passed ordinance authorizing city to sell \$35,000 street improvement and \$35,000 general improvement bonds.

Tenn., Nashville—City, S. H. McKay, City Clk., opens bids Nov. 25 for \$70,000 bonds: \$35,000, street improvement; \$35,000, general improvement.

Tex., Abilene—Taylor County voted \$100,000 jail building bonds.

Tex., Angleton—Brazoria County Road Districts, W. R. Bratton, County Clk., rejected bids for \$1,241,500, 5½% bonds; no date set for readvertisement. 10-30

Tex., Brady—McCullough County Comms. postponed election on \$1,055,000 highway improvement bonds.

Tex., Galveston—City Comsn. provided for issue of \$75,000 bonds for filling and draining east and flats; \$300,000 for parks and playgrounds; \$800,000, schools; \$150,000, permanent extension of drainage system; \$200,000, permanent paving; \$30,000, fire stations; \$100,000, sewer extensions.

Tex., Houston—City, W. E. Monteith, Mayor, opens bids Dec. 15 for \$3,730,000 not to exceed 5%, \$1000 denom. bonds: \$168,000, 4½% drainage sewer; \$374,000, drainage; \$440,000, 4½%, sanitary; \$340,000, sanitary; \$594,000, 4½%, water works; \$236,000, water works; \$408,000, street improvement; \$88,000, park; \$88,000, fire station; \$88,000, macad. paving; \$92,000, general improvement; \$44,000, White Oak Drive; \$10,000 bridges; \$160,000, bridge and subways; \$400,000, 4½% special improvement.

Tex., Irving—City voted \$20,000, not to exceed 6% sewer system and disposal plant bonds. 10-9

Tex., Laferia—City voted \$30,000 bonds: \$5500, refunding; \$2000, sewer extensions; \$8000, water works; \$14,500, street paving. 11-6

Tex., Liberty—Old River Drainage Dist. recently voted \$25,000 bonds.

Tex., San Antonio—City, C. M. Chambers, Mayor, considering issuing \$1,750,000 school improvement bonds early in December.

Tex., San Marcos—City votes Dec. 9 on \$130,000 sewer system bonds.

Tex., Austin—City, Geo. G. Grant, Dir. of Finance, opens bids Dec. 10 (instead of Dec. 3) for \$1,000,000 street, sewer and Park bonds. 11-6

Va., Buena Vista—City, R. J. Gardner, Judge of Corporation Court, voted \$30,000, 5% water bonds. 9-25

W. Va., St. Marys—City votes Dec. 12 on \$25,000, 5% improvement bonds.

W. Va., Wise—Wise County, J. W. Stewart, Chmn., Bd. of Supvrs., sell \$100,000, 5% road bonds Dec. 9.

Bond Issues Sold

Ky., Jackson—City sold \$20,439 construction bonds to W. T. Congleton & Co., Lexington.

La., New Orleans—City Comsn. Council sold \$695,000 paving lertificates to C. W. McNear Co., Chicago, at \$678,320.

Mo., St. Joseph—City, St. Joseph School Dist., A. L. Loving, Sec. and Business Mgr., sold \$500,000, 4% building bonds to National City Co., New York, and First Trust Co., St. Joseph, at 84.4 cents on the dollar. 10-23

S. C., Columbia—Peoples State Bank, Columbia, purchased \$3,000,000 tax anticipation notes at 2.52%.

Tex., Houston—Harrison County Navigation Dist., Joseph W. Evans, Chmn., sold \$923,000, 4½% coupon navigation bonds to syndicate represented by Carr, Moroney & Co. and Guardian Trust Co., both Houston, at par plus \$893.93 premium. 10-23

Tex., Austin—State Bd. of Education purchased \$172,850 bonds of school districts for permanent school fund as follows: Bowie County No. 14, \$400; Shelby County No. 77, \$450; Tatum, \$1000; Kaufman County No. 8, \$1000; Dawson County No. 7, \$2000; Stone-wall County No. 6, \$2500; Wheeler County No. 35, \$2500; Pharr-San Juan, \$10,000; Aspermont, \$60,000; Friona, \$60,000; Bailey and Cochran Counties district, \$25,000; Bosqueville, \$8000.

Tex., Benjamin—Knox County Consolidated School Dist. No. 27 sold \$28,000, 5% bonds to State of Texas.

Tex., Andrews—Andrews-McCarley School Dist. sold \$75,000, 6% bonds to State Bd. of Education, Austin, at par.

New Financial Corporations

Md., Baltimore—Continental Bond & Investment Co. of Maryland, Ltd., 1904 First Natl. Bank Bldg., chartered; James B. Diggs, Charles C. G. Evans.

N. C., Black Mountain—Bank of Black Mountain, capital \$50,000, chartered; F. B. Dennis, C. C. Dougherty.

N. C., Forest City—First National Bank in Forest City, capital \$50,000, chartered; W. S. Moss, Pres.; G. B. Harrill, Cashier. 10-30

American Bank & Trust Co., Oliver J. Sands, Pres., and West End Bank of Richmond, T. K. Vertner, Pres., both Richmond, Va., merged.

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Editor *Manufacturers Record*:

Permit me, as an individual and as a member of the Nashville Real Estate Board to thank you most heartily for the wonderful editorial on "Southern Real Estate Opportunities" recently appearing in your magazine.

The Nashville Banner in its editorial columns republished the editorial at length under the title, "Land Buying Time." Should other periodicals devote like space in behalf of the South, without the shadow of a doubt there would be noticeable benefits. We have the eyes of the nation focused upon us, as evidenced in the fact that the North and East are placing industries in our midst.

This city, like a great many other Southern cities, has had a remarkable growth and with national conditions aright there is no question of its high future.

WM. R. MADDUX.

[The editorial referred to by Mr. Maddux appeared in the MANUFACTURERS RECORD of October 16. It has been widely commented upon and reprinted in many papers throughout the South.—Editor MANUFACTURERS RECORD.]

City Planning Problems

Answer to the question, "Can character and individuality of cities and regions be consciously attained?" is being sought by the Committee on City and Regional Planning of the American Institute of Architects, as part of its nationwide study to promote "better planning of all communities for permanent human use as essential to modern civilization." The replies received up to this time indicate a widely conflicting opinion, according to Charles H. Cheney of Los Angeles, chairman of the committee.

J. C. Nichols, Kansas City, Mo., member of the National Capital Park and Planning Commission, believes that farsighted, intelligent planning and careful building up of the morale of the district is the best method. Herbert U. Nelson, of Chicago, executive secretary of the National Association of Real Estate Boards, questions the value of consciously striving for municipal beauty. Cities are composed of men and women working for better standards of living, and will continue to improve the quality of their development, according to Gardner S. Rogers, of the Civic Development Department of the United States Chamber of Commerce.

Mr. Nichols, developer of the Country

Club District of Kansas City, is quoted as stating: "Slowly, painfully America learned the lesson that there are great fundamental considerations in city building. When the first city planner came among us to declare that his art simply consisted in exercising 'such foresight as would promote the orderly and sightly development of a city, with due regard for health, amenity and convenience for its commercial and industrial advancement,' a revolution in our thought had occurred. And when the town planner looked beyond the corporate limits and included the city's environs, another advance took place."

Further pointing out that cleanliness enhances the charm of an urban community, that parks are inspiring, that playgrounds are a human necessity, and that segregated commercial, industrial and residential areas are essential for the sake of efficiency as well as for congenial living, Mr. Nichols continues: "But, speaking from nearly a quarter-century of experience in striving to apply the principles of the city planner to the practical demands of modern city living, especially as applied to the protection of home life through the perpetuation of fine influences not difficult to set up, the greatest thing to be desired is intangible. I refer to morale. Unless there is developed among the people a deep-seated loyalty to these things, no city is truly great."

Unusual Realty and Building Activity in San Antonio

With the October 1930 building permit total of \$1,206,184 topping the 1929 aggregate for that month by \$610,104 and surpassing the totals for all previous Octobers except that of 1926, the month is considered an outstanding one in San Antonio, Texas, real estate and building circles. The climax for this period of activity was sale of the Hicks Building on Houston St. at slightly under \$600,000, or \$12,000 per front foot, with the 10-year lease of a three-story structure on Travis Street involving a total rental of \$180,000 ranking as the second important transaction of the month.

An important factor in swelling the building permit total was the \$925,000 permit taken out by the Board of Education for the new senior high school for Spanish Acres, and beginning work on this structure resulted in an unusual amount of realty and building activity in the Woodlawn district where construction on nearly a score of homes has been started and about 200 lots sold. In

the Olmos Park district within the last six weeks the H. C. Thorman Co. has sold homes and sites involving \$200,000, while W. W. Thorman has started a \$500,000 home-building program.

Continuing a construction program at Randolph Field, the Federal Government awarded contracts amounting to about \$500,000 during the month, and plans were being drawn and bids being opened on work to involve approximately the same figure. Army authorities are also planning a \$500,000 construction program at Duncan Field, although this work will not start until 1931.

San Antonio has under way a program of park recreational buildings which resulted in beginning of work on one structure during the month, drawing of plans for two more and announcement that two or three others would be built.

The important development in the building material industry of San Antonio in October was purchase from the San Antonio Building Materials Co. of the Hillyer-Deutsch-Jarratt lumber yard by the Alamo Lumber Co., a \$1,250,000 organization. At about the same time the Melliff-Groce interests purchased the Woodlawn Yard of the building materials company.

\$1,000,000 Realty Deals

Real estate sales in Atlanta during October totaled more than \$1,000,000, according to statistics issued by the Atlanta Title & Trust Co. of that city. Sales consummated in the closing week totaled approximately \$350,000, the important deal for this period being the transfer of the \$60,000 property at the southeast corner of Peachtree Street and Merritts Avenue to J. Carroll Payne. The next largest deal of the week was sale of the Beaudry home at 2811 Andrews Drive to Mrs. Sam E. Finley at a price of \$65,000.

FLORIDA

9,640 acres, \$3 per acre; fine trucking and general agricultural land—a wonderful investment, just to let lay; or ideal for colonization; well located, 25 miles from Tampa, in the northeast corner of Hillsborough County, running over into Polk on the east and Pasco on the north, in the heart of the great Plant City Winter strawberry and trucking section. Send today for Fall list of Groves and Farms.

TAMPA-WEST COAST REALTY CO.

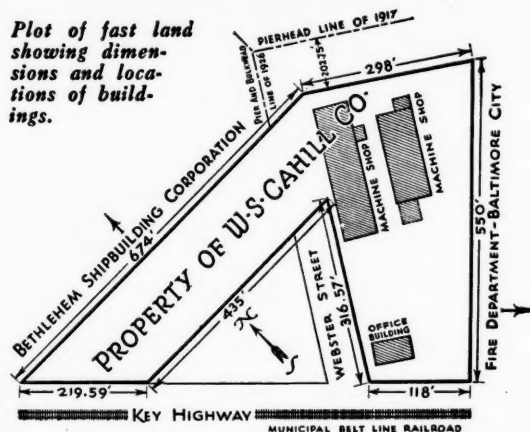
Tampa, Florida

FOR SALE *Complete Water Front Property* As an Entirety



Including all Real Estate, Buildings and Equipment

Plot of fast land showing dimensions and locations of buildings.



Fee simple water front property, situated in the harbor of Baltimore City. Five minutes' ride to center of city. Municipal Belt Line Railroad in front of property on Key Highway. Approximately $4\frac{1}{2}$ acres of fast land and 2 acres riparian rights.

Property of Bethlehem Shipbuilding Corporation adjoining on the North. Property of Fire Department, Mayor and City Council of Baltimore City, adjoining on the Southeast.

For further information, address

W. S. CAHILL COMPANY

Key Highway & Webster St.

BALTIMORE, MD.

FOR SALE—APPLE ORCHARD

In heart of the apple belt of Georgia. 40 acres, 600 trees, 22 years old, in good condition; 600 trees, 8 years old; 26 plums, 25 peaches, 10 cherries, all bearing. Will pay 8% on the investment now. Good improvements; house, barns, fine water wells, two good springs and branch running water. 5 acres in cultivation; close to market, packing houses, 2 miles; all spray tools and equipment for \$12,000, terms and long time to pay. Fine citizenship, schools, churches. Just the place for some one that wants to retire in the foot hills of the Blue Ridge Mountains in the finest all year climate. Electricity, hard roads.

S. E. DAVIDSON

67 Lafayette Drive

Atlanta, Ga.

IF YOU WANT TO GET—
Southern Business
Advertise in the
MANUFACTURERS RECORD

OPPORTUNITIES

Industrial and Agricultural

The A. & W. P.—W. Ry. of Alabama and Georgia Railroads traverse a territory rich in material and potential resources. Attractive industrial sites. For information apply:

Commercial and Agricultural
Dev. Dept.—Above Lines
Atlanta, Georgia

LAND

For every purpose on

The
East Coast of
FLORIDA

From the lands owned by the Model Land Company, of the Flagler System, along the Florida East Coast there is no doubt a location can be selected suitable for your purpose.

Let us know your requirements

Address

Model Land Co., Flagler System
St. Augustine, Florida

The late Henry M. Flagler and his organizations
have served Florida since 1886.

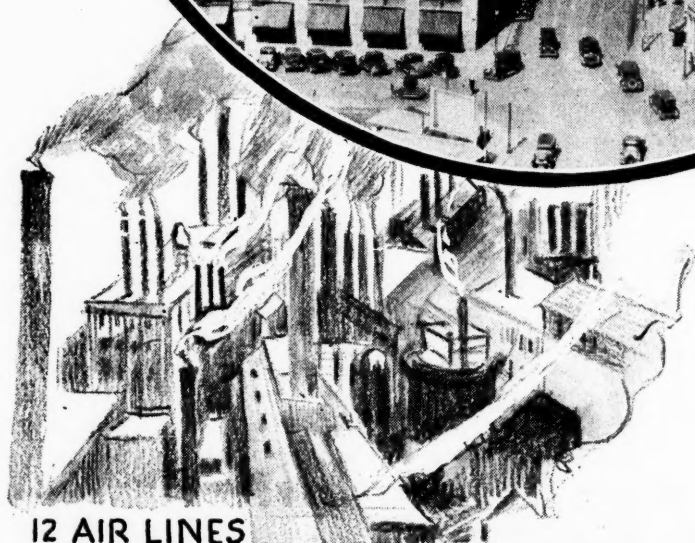
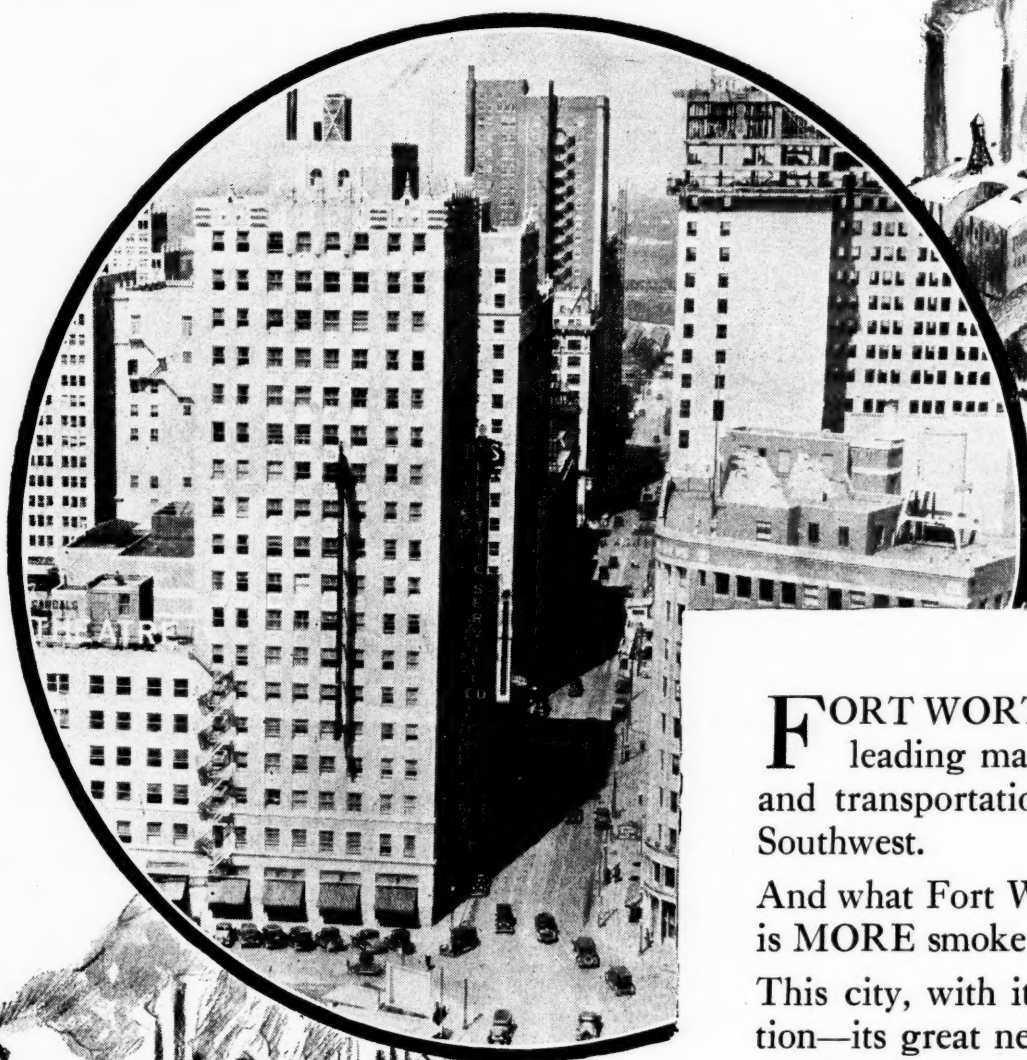
ALABAMA

is strategically located as regards export markets through its port of Mobile, and its proximity to the Panama Canal. This is particularly true with regard to the countries of Mexico, Cuba, Venezuela, Colombia, Argentina, Brazil, Uruguay, Chile, Peru, and other South and Central American countries. These countries all are large importers of lard, automobile tires, cotton cloth, southern pine, tubular products, automobiles, explosives, soap, galvanized iron sheets, rails, barbed wire, and electrical, industrial, farming, and oil well machinery, all of which items may be practicably manufactured within this State.*

*Extract from a comprehensive survey prepared by the Alabama Industrial Development Board. Copies of this survey will be mailed free of charge to executives of responsible enterprises. Address: Alabama Industrial Development Board, Brown-Marx Building, Birmingham, Ala.

This advertisement published through the courtesy of the Alabama Power Company, whose New Industries Division is actively cooperating with the Alabama Industrial Development Board in finding profitable locations for new enterprises in Alabama.

MORE SMOKE STACKS FOR FORT WORTH



12 AIR LINES

FORT WORTH

THE MANUFACTURING AND TRANSPORTATION
CENTRE OF THE SOUTHWEST

19 RAIL OUTLETS

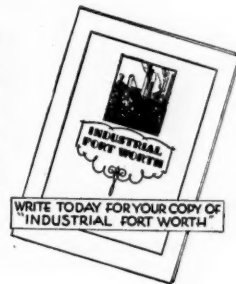
For Information, Address Publicity Department
CHAMBER OF COMMERCE, FORT WORTH, TEXAS

FORT WORTH is already the leading manufacturing city and transportation center of the Southwest.

And what Fort Worth wants now is **MORE** smoke stacks.

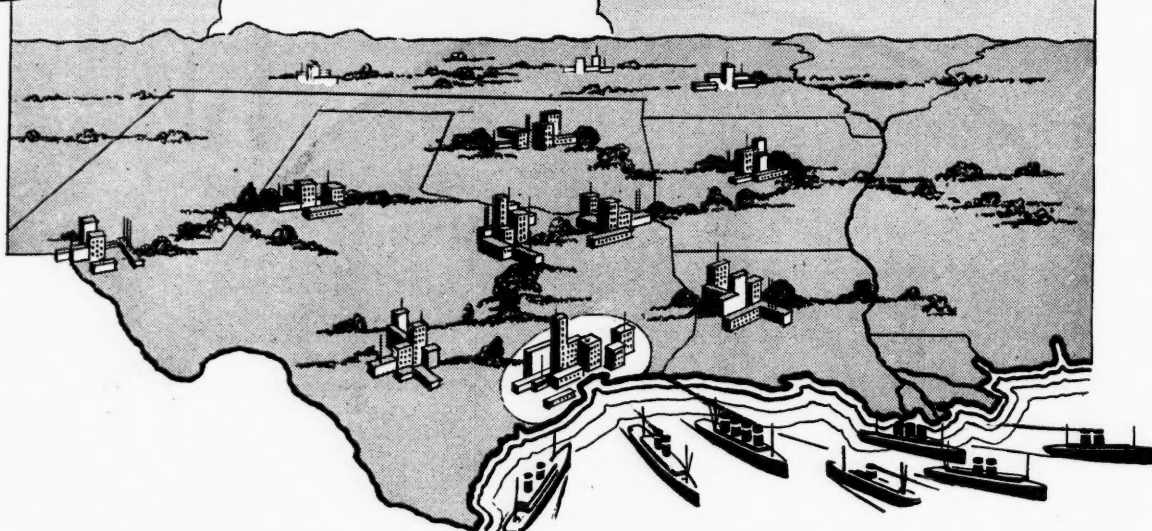
This city, with its strategic location—its great network of 19 rail outlets—its 12 operating airplane lines—its unlimited, adjacent supply of raw materials—its low power and water rates—its all year working climate; is destined to become one of the leading manufacturing cities of the nation.

With the most rapidly growing trade territory in the United States and the world's greatest petroleum region Fort Worth offers every inducement—every advantage—every facility to the manufacturer to locate here and bring "MORE smoke stacks to Fort Worth".



GALVESTON—AMERICA'S PORT OF QUICKEST DISPATCH

GALVESTON



... Where the Southwest meets the Sea!



Nature formed a deep-sea harbor, a protected haven for ships on the Southwestern Gulf coast. Man made it a modern efficient port. So GALVESTON became the water gateway to and from the Southwest.

GALVESTON is the natural port of this great region. The waters of the Gulf itself wash its piers—vessels are on the sea as soon as they cast off.

Down to GALVESTON rolls the level Gulf plain, offering no handicaps to rail systems that connect inland cities with their deep-sea port.

These natural advantages, together with world-famous efficiency in port operation, make

GALVESTON the logical point of junction for water and rail shipping.

When your traffic routing touches the Southwest, investigate the advantages of GALVESTON. For over a hundred years, GALVESTON has been the sea port of the Southwest.



Galveston Wharf Company

Established 1854

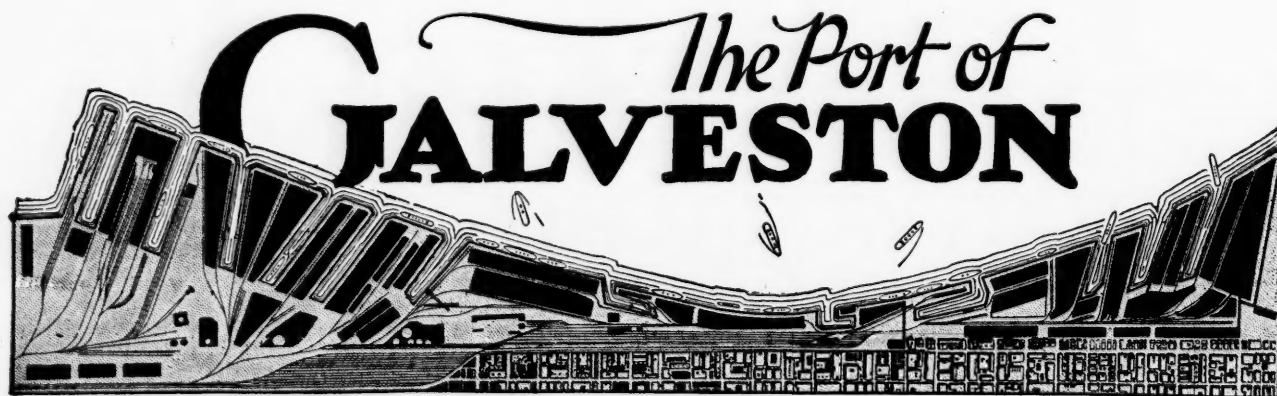
Galveston, Texas, U. S. A.

Geo. Sealy, Pres.

F. W. Parker, Gen. Mgr.



Let us put your name on our free subscription list for the "Shippers Digest of Galveston", published weekly. Full sailing lists of vessels in the coastwise and foreign trade. News of cotton, grain, flour and general cargoes. Write us today!



\$750,000 Hebrew Association Building

A \$750,000 building for the Young Men's and Young Women's Hebrew Association has been completed in Baltimore. The 2½-story structure, embodying a combination of Moorish and American architecture, is built on an L-shaped site, 96 by 85 by 194 feet, and has an exterior of brick and limestone with a large portion of the wall space devoted to carefully planned windows.

The first floor includes lounge rooms, lobby, gymnasium-auditorium, library and health club. Lounge rooms flank the lobby entrance on both sides. The lobby has terrazzo floors, vaulted ceiling, elaborate lighting fixtures, hand-carved Jewish symbols on the wood-work descriptive of the Tribes of Israel and appropriate furnishings. To the left of the lobby and adjacent to gymnasium, a special check room equipped with modern steel equipment is provided to accommodate 1000 people. Off the main lobby and entered through a small foyer is the main gymnasium, also to be used as an auditorium; the large stage may be used as an auxiliary gymnasium for men. An auxiliary gymnasium for women adjoins the main gymnasium. There is a fully equipped kitchen 40 feet long, provided with movable partition, portable platform and curtains, making it available for dramatic rehearsals. For future development, arrangements have been made for five large rooms for club rooms, storage, squash or handball courts.

On the mezzanine floor is a complete library, consisting of six club and class rooms, varying in size and built to accommodate 30 to 50 persons. A fire-proof projection room on this floor, overlooking the gymnasium, is to be equipped with moving picture and stereopticon machines. The health club, equipped with electric sweat baths, Sunlight lamps, violet ray and infra red lamps, vibrator, electric horse, showers, lockers, rubbing slabs and massage tables and a rest room, is also on this floor.

The second floor includes a basket room for members' clothes, locker and shower rooms and swimming pool, said to be the only suspended pool in this section of the country. It is 30 by 75 feet, and ranges in depth from 3½ to 9 feet. A chlorination system is provided, with a continuous flow of water at all times. A vacuum cleaner in the pool is a feature and vapor-proof electric fixtures insure proper lighting. A spectator balcony and swimming instructor's office are included, also a steam room adjacent.

A large office for physician, two medical examination rooms and four handball courts are on the third floor.

Basement facilities include boys' game room, rest room, smoking room, billiard room, social hall, service rooms and heating and ventilation systems. A 16-foot, marble fountain with complete luncheonette equipment has been installed. The social hall is approximately 52 by 65 feet, with a promenade 10-feet wide, having iron grill railing lining three sides of the room. A stage, 30 by 19 feet, is flanked by dressing rooms. Living quarters for the building superintendent and fully equipped laundry are on this floor. Heat is supplied by a district steam heating plant and temperature is automatically controlled.

Frainle Bros. & Haigley were the builders, Joseph Evans Sperry the architect and Reeder, Eiser & Akers, engineers, all of Baltimore. Sub-contracts were let as follows, all Baltimore except as otherwise indicated:

Reinforcing steel—Kalman Steel Co., Inc.
Cut stone work—James O'Meara.

Brick work—Koyne & Weber

Structural and ornamental steel—Dietrich Bros.

Steel sash—David Lupton Sons Co.

Excavation—T. Bresnan & Sons

Hollow metal doors—United Metal Products Co.

Metal casement sash—Henry Hope & Sons
Metal double hung windows—Campbell Metal Window Corp.

Dumbwaiter—Sedgewick Machine Works

Roofing, sheet metal and waterproofing—Wm. E. Cotton & Co., Inc.

Millwork—Herman Noss & Sons

Plastering—Coleman & Reilly

Marble, tile, terrazzo and slate—J. B. Dunn & Son, Inc.

Painting and glazing—Farber-Burgess Co.

Glass—Hires Turner Glass Co.

Plumbing—Lloyd E. Mitchell, Inc.

Electric wiring—Joseph B. Dreisch

Brick—Baltimore Brick Co.

Electric fixtures—Blumenthal-Kahn Electric Co.

Auditorium seating—Baird Seating Co.

Gymnasium equipment—Narragansett Machine Co., Providence, R. I.

Kalamain and tinclad doors—Richmond Fireproof Door Co., Richmond, Ind.

Fireproof doors—Compound & Pyrona Door Co., St. Joseph, Mich.

Vault doors—York Safe & Lock Co., York, Pennsylvania.

Southern Offers Improved West-South Passenger Service

An improved passenger service between the West and Florida is to be instituted January 4 by the Southern Railway System for the coming winter season. Included in the program is an entirely new schedule for the "Royal Palm de Luxe" with afternoon departure from Chicago, Detroit and Cleveland and through sleeping cars to both Miami and St. Petersburg, Fla. An improved schedule for the "Suwanee River Special," to run via the direct Hampton route and additional through sleeping car accommodations for the "Ponce de Leon" and the all-year "Royal Palm" will also be inaugurated.

Fruit Fly Quarantine Lifted

The Federal quarantine on Florida products on account of the Mediterranean fruit fly was lifted November 15, removing all remaining restrictions on the interstate movement of host fruits and vegetables from the regulated area of Florida. This action follows conferences with Florida officials, including Governor Carlton and members of the State plant board. Grove owners are no longer required to pick up and dispose of drops, culls and windfalls. There is to be no further issuance of property certificates, and present regulations as to packing house sanitation, shipping permits and quarantine line inspection also are discontinued.

Baltimore and Ohio Improvements

Wheeling, W. Va.—Improvements forming the second part of a \$1,185,000 program are to be made in this territory at a cost of \$680,000 by the Baltimore and Ohio Railroad. Included in this work is installation of automatic signals from Glenwood Junction to Gilkeson and insertion of centralized train control from Gilkeson to Wheeling, a distance of 42 miles.

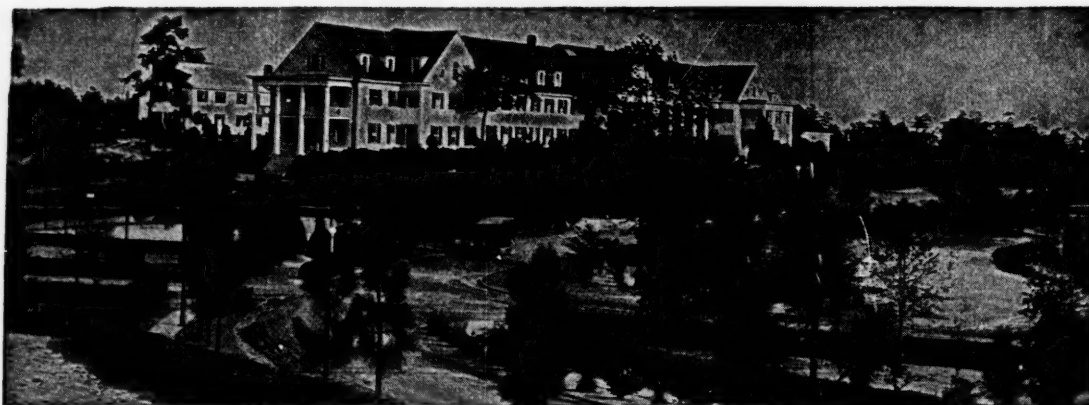
Contracts for the first half of the program, involving work costing \$505,000 in Pennsylvania, have been let to the T. J. Foley Co., Pittsburgh, and the Empire Construction Co., Baltimore.

Increase in Allegheny Gas Sales

Large comparative increases in sales are reported for the past several months by the Allegheny Gas Corporation. Thirty-six per cent of its common stock is owned by the Appalachian Gas Corporation. The September report shows the highest monthly gain, 70 per cent more than September of last year.

Allegheny Gas Corporation supplies natural gas to a number of important industrials and utilities, and the rise in September consumption indicates an increase in industrial activity. Some of the larger customers are United Fuel Gas Company and Huntington Development and Gas Company, subsidiaries of Columbia Gas & Electric Corporation; South Penn Oil Company, Owens-Illinois Glass Company, Libbey-Owens-Ford Glass Company, Pittsburgh Plate Glass Company, Lamb Glass Company, Hope Engineering Company and Cooper-Bessemmer Corporation.

Jefferson City, Mo.—The State Board of Fund Commissioners on Dec. 4 will offer a \$5,000,000 road bond issue for sale.



The Beauty and Charm of the Sandhill Section of North Carolina

The bracing, pine-laden air with gentle, continuous, warm sunshine makes of Southern Pines the ideal outdoor winter resort. The sandy soil promptly disposes of all surface moisture even after hard rains and the warm sunshine immediately clarifies the air.

Congenial people share in a wide range of entertainment indoors and out, while enjoying the perfect service of this hotel.

Southern Pines is only 12 hours from Washington; 16 hours from New York; 20 hours from Boston; half way between New York and Florida on the main line of the Seaboard Air Line Railway with through Pullman service.

HIGHLAND PINES INN

Your inquiries are invited.
CREAMER & TURNER
Proprietors

Southern Pines

Season Nov. 20 to May 1st

Golf—Polo—Riding

Tennis—Racing—Hunting

Canoeing—Motoring

Southern Pines, N. C.



BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



— PROPOSALS —

Bids close December 10, 1930.

War Department, Office Constructing Quartermaster, Fort Bragg, N. C. Sealed proposals in triplicate will be received until 10.00 A. M., December 10, 1930, and then publicly opened, for the construction and completion of Nurses' Quarters, at Fort Bragg, North Carolina. \$15.00 deposit certified check payable to Treasurer of United States required for plans and specifications. A certified check or Bid Bond in the amount of \$6,000.00 will be required with each proposal. Further information on request.

Bids close December 3, 1930.

U. S. ENGINEER OFFICE, First New Orleans District, New Orleans, La. SEALED BIDS, in duplicate, will be received until 2 P. M., December 3, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for the construction of a railway swing bridge across the site of the Louisiana-Texas Intracoastal Waterway on the Bayou Sale branch of the Texas and New Orleans Railroad Company near North Bend, La. Further information furnished on application.

Bids close November 26, 1930.

Sealed Bids, indorsed "Bids for Switchboard, Specification No. 6284," will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 o'clock a. m., November 26, 1930, and then there publicly opened, for 10 K. W. exciter, conduits, cables, potheads, and a switchboard, installed at the Marine Barracks, Parris Island, S. C. Specification No. 6284 and accompanying drawing may be obtained on application to the Bureau or to the Commanding General, Marine Bar-

GENERAL INFORMATION

About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday.
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

racks, Parris Island, S. C. Deposit of a check or postal money order for \$10, payable to the Chief of the Bureau of Yards and Docks, is required as security for the safe return of the drawing and specification. A. L. PARSONS, Chief of Bureau, October 30, 1930.

Bids close December 23, 1930.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., November 15, 1930.—SEALED BIDS will be opened in this office at 3 p. m., December 23, 1930, for the extension and remodeling (except elevators) of the U. S. post office and court house at Oklahoma City, Okla. Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$50.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

Bids close December 9, 1930.

Bids on Bonds Solicited

Wise, Va.
At the Courthouse thereof on the 9th day of December, 1930. The Board of Supervisors will refund 400 one thousand dollar 1911, Wise County Road Bonds, bearing 5% interest. These bonds will be issued at 4½%, and will be serial bonds, will be dated February 1, 1931, payable as follows: \$10,000 each year beginning Feb. 1, 1934, until Feb. 1, 1937; and \$15,000 each year beginning Feb. 1st, 1938, until Feb. 1, 1957; and \$20,000 each year thereafter until paid, or some other form of serial maturities. Bids will be by auction. Interest will be paid semi-annually. Those bonds will be refunded under section No. 2735 of the Code of Virginia. This Board reserves the right to reject any and all bids.

BOARD OF SUPERVISORS, WISE
COUNTY, VA.
By J. W. Stewart, Chairman.

Bids close November 25, 1930.

U. S. Engineer Office, Rock Island, Illinois.—Sealed bids, in duplicate subject to the conditions contained herein, will be received until 3:00 P. M., November 25, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for constructing and delivering ten 110'x24'x5' steel material barges. Further information on application.

Bids close December 5, 1930.

\$500,000 4 1/4% Gas Works Refunding Bonds

Richmond, Virginia.

Sealed bids will be received by the Committee on Finance of the Council of the City of Richmond, Virginia, in Room 312, in the City Hall, until 5 o'clock, P. M., Friday, December 5, 1930, for the purchase of the following described bonds of said City, viz.:

\$500,000 Gas Works Refunding Bonds, dated January 1, 1931, bearing interest at the rate of four and one-quarter per centum (4 1/4%) per annum, payable semi-annually on January 1st and July 1st, and maturing, January 1, 1955.

All of the bonds will be of the denomination of \$1,000 each and in coupon form, payable to bearer, with the privilege of registration as to principal only, or as to both principal and interest. Principal and interest will be payable at the office of the City Comptroller or (unless the bonds be registered) at the office of the Fiscal Agent of the city of Richmond in the city of New York.

Bids should be enclosed in a sealed envelope, marked "Proposal for Bonds," and addressed to Landon B. Edwards, City Comptroller, Room 103, City Hall, and must be accompanied by a certified check upon an incorporated bank or trust company for 1 1/2 per cent. of the face amount of the bonds bid for. For further information, apply to the Comptroller.

The right is reserved to reject any and all bids.

The successful bidders will be furnished with the opinion of Messrs. Reed, Hoyt & Washburn, of New York City, that the bonds are valid and binding obligations of the City of Richmond, and that the City has power to levy taxes on the taxable real property therein for the payment of such obligations without limitation of rate or amount.

The bonds will be prepared under the supervision of the Liberty National Bank and Trust Company in New York, which will certify as to the genuineness of the signatures of the City officials and the seal impressed thereon.

These bonds are legal investments for savings banks and trust funds in New York.

W. C. CARPENTER,
Chairman Committee on Finance.

Bids close December 2, 1930.

Maryland Highway Work

STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building one section of State Highway as follows:

Washington County, Contract No. W-58-63—Federal Aid Project 197B-Re. One section of State Highway along the Parkhead Relocation on the National Pike between Licking Creek and Millstone, a distance of 2.4 miles (concrete) will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 2nd day of December, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 12th day of November, 1930.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close December 17, 1930.

Notice for Proposals on Utilities

Kings Mountain, N. C.

Sealed proposals will be received by the City of Kings Mountain, North Carolina, at Eleven (11:00) o'clock A. M. on December 17th, 1930, at the office of the City Clerk for the purchase of Electric and Water Systems now owned and operated by that city.

Should an acceptable proposal be received, this will be submitted to the voters for ratification.

A certified check in an amount of not less than Five Thousand (\$5,000.00) Dollars is required, and the right is reserved to reject any or all proposals.

HON. WILEY H. MCGINNIS, Mayor.
Further information may be obtained from the undersigned:

UTILITIES ENGINEERING & MANAGEMENT COMPANY,
917 Johnston Bldg.,
Charlotte, N. C.

Bids close December 16, 1930.

Delaware Highway Work

Dover, Del.

Sealed proposals will be received by the State Highway Department at its office, Dover, Del., until 2 o'clock P. M. December 16th, 1930, and at that place and time publicly opened, for contracts involving the following approximate quantities:

- Contract No. 81A
Guard Rail—Penny Hill
800 Lin. ft. Wire Cable Guard Rail.
6 Dead Men for Guard Rail.
- Contract No. 144A
Fill (Marshallton Cutoff), 0.30 miles
350 Cu. yds. Excavation.
14,000 Cu. yds. Borrow.
500 Cu. yds. Wet Excavation.
140 Cu. yds. Class A Concrete (footings).
360 Cu. yds. Class A Concrete (above footings).
- 15,000 Lbs. Reinforcement.
5,500 Lbs. Structural Steel and Castings.
1,500 Lbs. Catch Basin Castings.
44 Lin. ft. 12-inch C. I. Pipe.
150 Lin. ft. 24-inch R. C. Pipe.
1,700 Lin. ft. Timber Piling.
3,000 Ft. B.M. Sheet Piling.
- Contract No. 169
St. Georges-Drawyers (Dual Highway),
4.911 Miles
2 1/2 Acres Clearing.
86,000 Cu. yds. Excavation.
22,000 Cu. yds. Borrow.
1,000 Tons Broken Stone Base Course.
13,300 Cu. yds. Cement Concrete Pavement.
7,000 Lin. ft. 3/4-inch Premoulded Bituminous Exp. Joint.
6,000 Sq. yd. Cement Concrete Sidewalk.
200 Tons Amiesite Asphalt Surface Course.
- 400 Cu. yds. Class A Concrete.
16,000 Lbs. Reinforcement.
16,000 Lbs. Gratings Castings.
400 Lin. ft. 12-inch C. M. Pipe.
600 Lin. ft. 15-inch C. M. Pipe.
230 Lin. ft. 18-inch R. C. Pipe.
500 Lin. ft. 24-inch R. C. Pipe.
300 Lin. ft. 30-inch R. C. Pipe.
30 Lin. ft. 36-inch R. C. Pipe.
50 Lin. ft. 48-inch R. C. Pipe.
200 Lin. ft. Relaid Pipe, 18 inches and under.
- 1,500 Lin. ft. 4-inch Pipe Underdrain.
4,500 Sq. yds. Class A Concrete Gutter.
3,200 Lin. ft. Wire Cable Guard Rail.
9,000 Lin. ft. Wood Shoulder Curb.
1,200 Lin. ft. Timber Piling.
12 Dead Men for Cables.

Performance of contract shall commence within ten (10) days after execution of the contract and be completed as specified.

In the employment of labor preference shall be given to residents of the State of Delaware.

Monthly payments will be made for 90 per cent of the construction completed each month.

Bidders must submit proposals upon forms provided by the Department.

Each proposal must be accompanied by a surety bond, certified check or money to the amount of at least ten (10) per centum of the total amount of the proposal.

The envelope containing the proposal must be marked "Proposal for the construction of State Highway Contract No."

The contract will be awarded or rejected within twenty (20) days from the date of opening proposals.

The right is reserved to reject any or all bids.

Complete sets of plans and specifications may be obtained upon receipt of two dollars (\$2.00) for each contract, which amount will not be refunded.

STATE HIGHWAY DEPARTMENT,
Dover, Delaware.

Bids close December 16, 1930.

Water Works and Sewer Improvements

SPARTANBURG METROPOLITAN SUB-DISTRICT "B"

SPARTANBURG COUNTY, S. C.

Spartanburg, S. C.

Sealed proposals for the construction of water works and sewer systems for The Spartanburg Metropolitan Sub-District "B," near Spartanburg, S. C., will be received by the Committee for Spartanburg Metropolitan Sub-District "B" at the office of the Spartanburg Metropolitan Commission in Spartanburg, S. C., at or before ten (10) o'clock A. M. December 16th, 1930.

The work will consist of the construction of approximately 6.3 miles of 8-inch and 10-inch sewer mains, 103 manholes, 6 flush tanks, 1.6 miles of 6-inch and 8-inch cast-iron water mains, 3 miles of galvanized iron pipe lines, 17 hydrants and all appurtenances.

Each proposal must be accompanied by a cashier's check for \$3000.00, payable to the Committee for Spartanburg Metropolitan Sub-District "B," as a bidder's guarantee. A bidder's bond will not be accepted. A surety bond will be required of the successful bidder.

Plans and specifications may be seen at the office of the Spartanburg Metropolitan Commission or at the office of the Engineers, 208 Montgomery Building, Spartanburg, S. C. Plans and specifications will be furnished on application to the Engineers, accompanied by a deposit of \$10.00. Seven dollars of this amount will be returned to those making bona fide bids and returning plans within two weeks from date of letting.

The Committee for Spartanburg Metropolitan Sub-District "B" reserves the right to reject any and all bids or any part of a bid, and to award to a bidder any part of the work as seems best for the interest of the Spartanburg Metropolitan Sub-District "B."

South Carolina law requires that all contractors bidding on work in this state in excess of \$10,000.00 procure a bidder's license.

THE HARWOOD BEEBE COMPANY,
Engineers,
Spartanburg, S. C.
U. M. KILGO, Chairman;
J. E. BROCK,
S. C. BAXTER,
The Committee for Spartanburg Metropolitan Sub-District "B."

Bids close December 16, 1930.

Sanitary Sewers

Baton Rouge, La.

SEALED PROPOSALS will be received by the Commission Council at the City Hall, Baton Rouge, Louisiana, until 11 A. M. on Tuesday, December 16, 1930, for the construction of Sanitary Sewers. Said proposals will be opened and read publicly at the Commission Council meeting on above date and hour.

The work includes the furnishing of all labor, materials and equipment of every kind necessary to construct approximately twenty-two (22) miles of sanitary sewers ranging in size from eight (8) inch to thirty (30) inches and in depth up to twenty-six (26) feet.

All bids must be made on the official proposal form.

Plans and specifications are on file and may be examined at the office of L. J. Voorhies, C. E., Consulting Engineer, City Hall, Baton Rouge, La. A set of plans and specifications may be obtained upon deposit of \$25.00, \$15.00 of which deposit will be refunded upon the return of plans and specifications in good condition within ten days after contract is awarded.

A certified check on a bank satisfactory to the Commission Council in the sum of Ten Thousand (\$10,000.00) Dollars must accompany each proposal. The certified check must be conditioned that if bid is accepted a contract will be entered into and the performance of same secured within ten days after notification of acceptance of bid. In case bid is rejected or contract entered into, certified check will be returned, otherwise said check will be retained by the City of Baton Rouge, La., as liquidated damages. Successful bidder will be required to furnish surety bond through a local agency in the full amount of the contract.

The right is reserved to reject any or all bids.

L. J. VOORHIES, C. E.,
Consulting Engineer.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

TO LEASE—240 A. in Southeastern Okla. for mineral development. Large adjacent tract available, with price, location and combination of natural agencies that merit investigation. Facts given on request.
F. D. McCALL, Frisco City, Ala.

MANGANESE DEPOSITS

FOR SALE ONLY—Rich manganese deposits in Ala. near Birmingham.
THE MIDVALE MINING & DEVELOPMENT CO.,
W. H. Amerine, Secretary
Box 1121, Montgomery, Alabama.

TIMBER AND TIMBER LAND

FOR SALE—5 million feet saw timber, poplar, oak, gum, pine. None over 1½ miles from railroad station. T. W. McAllister, Buena Vista, Ga.

ACREAGE BARGAINS—We have several desirable tracts; some are well stocked with fast growing pine timber. Many have enough advance growth to pay a good return on the investment above carrying charges during the holding period. Let us select the tract and manage it, taking our remuneration as a percentage of net earnings.
THE JAMES D. LACEY COMPANY,
1409 Barnett Bldg., Jacksonville, Fla.

FARM, FRUIT AND TRUCK LANDS

FLORIDA

FOR SALE—20 acres with 50 bearing fruit trees, 8-room residence, furnished; 800 foot fronting on river, 200 foot seawall, opposite side of river from Fort Myers. River is about 2 miles wide and about 18 miles from Gulf. About 4 miles from bridge; beautiful shrubs and flowers. A splendid buy.
P. JOHN HART REALTY CORP.,
P. O. Arcade,
Fort Myers, Fla.

GROVE OPPORTUNITY

63 ACRES mixed grove, avocados, mangos, grapefruit, oranges, many novel miscellaneous fruits, 175 acres raw land additional. Among choicest properties in Redlands. Three houses on property. If you have \$35,000 you can buy the best grove investment ever offered in Dade County.
CHARLES I. BROOKS,
2272 S. W. 11th Terrace, Miami, Fla.

GEORGIA

FOR SALE—Forty-one acres in north Georgia, one-hour drive from Atlanta; 10-room house, 3 baths, electric lights, modern in every particular; wonderful mountain view, state highway; a real bargain for quick sale. Address P. O. Box No. 1, Canton, Georgia.

FOR SALE—3,300 acres finest farm land in State of Georgia. 85% cultivable; 50% now in cultivation. First class general farming or dairying proposition; or ideal for manufacturing site. Railroad and public highways running through lands with station about center of tract. Large brick and concrete warehouses and barn with adjacent side-tracks. Brick commissary and dwelling; good tenant houses; telephone; electricity and artesian water. Ideal climate; near good churches and schools. Best references as to going, high class proposition. Sell for part cash, balance terms. Address 9060 care of Manufacturers Record.

TEXAS

LOWER RIO GRANDE Valley orchards and acreage at actual value. Owner's price direct to you. Send for list. ROBERTS REALTY CO., Realtors, McAllen, Tex.

WONDERFUL 885 ACRE FARM, well located, every modern improvement, no finer land anywhere. Price \$90 per acre, which is a sacrifice. T. H. Barrow and Sons, Austin, Texas.

Rates, Terms and Conditions

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to line. When the advertisement contains a number of long words proper allowance should be made.

Rates for Special Contract:

100 lines 28c a line
300 lines 26c a line
500 lines or more 25c a line

TERMS: For transient advertising cash with order; check, postoffice or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS: No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

HUNTING PRESERVE

IDEAL VIRGINIA HUNTING PRESERVE AND FARM—1450 Acres.

700 acres woodland, balance farming land, pasture and meadows, watered by large creek and small streams. Attractive modern nine-room residence, three baths, steam heat and water system. Manager's house, several tenant settlements and stock barns.

Abundance of game, such as wild turkeys, quail, rabbits, squirrels and fur-bearing animals; some deer.

Located thirty miles from Lynchburg, seven miles from small town. Photographs, price and full details on request. Non-resident owner, anxious to sell.

GEO. V. VENABLE & CO.,
Lynchburg, Virginia.

BUSINESS OPPORTUNITIES

LONG TERM LOANS, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

CONTRACTING FIRM with good reputation in State Highway Work desires working partner with at least two hundred thousand dollars cash in order that business may be enlarged. Address P. O. Box 493, Leominster, Mass.

A SURETY BOND, Bonded Trustee holding trust funds, will protect Profit Participating 8% preferred shares, of a patented machine manufacturing Co., so 75% can be withdrawn on 30 days' notice. The investments will be enterprise starting, with unusual employment and profit possibilities; Government records confirm practicability of invention for commercializing. For further protection facts, etc., address No. 9061, care Manufacturers Record.

A WELL KNOWN COMPANY—Located in Mobile, Alabama, one of the most important port cities of the South, manufacturing and marketing an approved and highly recommended product used extensively in the building trade, desires additional capital for publicity and expansion work. Present owner very active in several other businesses and unable to devote necessary time and effort to all. Would sell whole or part interest to man of ability and experience who would assume share of management commensurate with investment. This is a wonderful opportunity for the right man with \$40,000 to \$50,000 to invest. Property recently appraised. Will negotiate with principals only. Give references, experience and financial ability in first letter. Address P. O. Box 1057, Mobile, Ala.

BUSINESS OPPORTUNITIES

RETIRING FROM BUSINESS—For Sale —Established jewelry store and repair shop in County Seat—town in Northeast Arkansas. Population 4500. Address No. 9050, care of Manufacturers Record, Baltimore.

MANUFACTURERS—Write for our FREE Classification Sheets of inventions for sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER MFG. CO., 578 Enright, St. Louis, Mo.

FINANCIAL

TEXAS—Investments offered in the great Southwest. Telephone, electric light, gas, water works, real estate, first mortgages. BOX 1929, AMARILLO, TEXAS.

A CONCERN that knows values and is well established wants to represent company that has money to loan. All loans to be secured by first mortgages in Oklahoma real estate. The best of bank reference furnished Address VICTOR MEAD COMPANY, 319 N. Harvey St., Oklahoma City, Okla.

TRANSLATIONS

COMMERCIAL and Manufacturers' translations, letters, advertising matter into and from French, German, Italian, Portuguese and Spanish. Letter rates 25c per 100 words into English, 35c per 100 words into other languages. F. M. ELLIS, Griffin, Ga.

INDUSTRIAL SURVEYS

ENGINEERING REPORTS on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.

TECHNICAL SERVICE CO.,
Woolworth Building New York City

INDUSTRIES WANTED

WELL-LOCATED Southern town wants industry. Will furnish plant, moving expenses, additional capital and other concessions.

INDUSTRIAL SERVICE CORP.,
Asheville, N. C.

INDUSTRIAL PLANTS

FOR SALE—Sash, door and millwork plant, ready to operate, well located, resident skilled labor. Liberal terms. Address No. 9057, care of Manufacturers Record.

FOR SALE
SHEET METAL PLANT
fully equipped and operating. Sheets and angles available at mills here. Address
H. McDERMOTT,
P. O. Box 42, Birmingham, Ala.

FOR SALE OR TRADE
WOOD WORKING MANUFACTURING PLANT, brick construction, over 100,000 square feet floor space. Ten acres, located on main line Belt Railway which serves Chattanooga, and concrete constructed thoroughfare with car line. Consider this plant absolutely the best plant in the city that is for sale. Will make extremely low price, which represents about half of last appraisal. Address CHATTANOOGA WAGON AND BODY COMPANY, Chattanooga, Tenn.

FACTORY AND WAREHOUSE SITES

FOR MANUFACTURING OR WAREHOUSE
Corner Lot 99x340.

Well located on good street and extending back to tracks of three railroads. A special price to a quick buyer.

F. C. ABBOTT & CO.,
201 Johnston Building,
Charlotte, N. C.

33 years in Charlotte Real Estate.

FACTORY SITES

TWO AND ONE-QUARTER MILES railroad frontage industrial sites for sale at Baton Rouge. Southern Land and Investment Company, Baton Rouge, La.

FOR SALE OR LEASE—INDUSTRIAL OR MANUFACTURING SITE.

Good Buildings: Iron Clad, 60' x 100'; 50' x 60'; 32' x 70'; Concrete Floors. Wood Frame, 45' x 100'; 34' x 70'; Wood Floors. Brick, 30' x 150'. Wood Floors. All equipped with Sprinkler System; 30 miles from Atlanta on Seaboard Railway. Owner 686 Orme Circle, N. E., Atlanta, Ga., or Industrial Agent, S. A. L. R.W.Y. CO., Portsmouth, Va.

PATENT ATTORNEYS

PATENTS—Booklet free. Highest references. Best results. Promptness assured. WATSON E. COLEMAN, Patent Lawyer, 724 Ninth St., N. W., Washington, D. C.

SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 600-4, Barrister Building, Washington, D. C.

PATENTS—TRADEMARKS—COPYRIGHTS Charlotte office convenient to South. PAUL B. EATON, Registered Patent Attorney, 218 Johnston Building, Charlotte, N. C., and 314 McLachlen Building, Washington, D. C.

FREE "PATENT PARTICULARS" Sterling Buck, over 23 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

AGENCIES WANTED

MANUFACTURERS desiring representation in North and South Carolina with textile and other industries, municipal and utilities. Address No. 9062, care Manufacturers Record, Baltimore, Md.

REPRESENTATIVES WANTED

IF YOU HAVE a following among steam boiler operators and are not afraid to work you can make good money by selling our Boiler Compounds on commission basis. We make water analysis and guarantee results on our Water and Metal Treatments. Write for particulars. SOUTHERN PRODUCTS CORPORATION, New Orleans, La.

MEN WANTED

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty years. Send only name and address for details. R. W. BIXBY, INC., 103 Downtown Bldg. Buffalo, New York

SITUATIONS WANTED

CAPABLE reading and executing blue prints, estimate amounts, sales and equipment installation, experience. Reference. No objection travel. Address No. 9059, care Manufacturers Record, Baltimore, Md.

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FOR SALE

Large carload inch chestnut lumber, dry one year, large per cent f. a. s. SIGRIST BROS., Navarre, Ohio.

CONSTRUCTION WORK WANTED

LARGE GENERAL CONTRACTING FIRM with much experience desires work in Southern territory, preferably the Virginias, Carolinas and Georgia. Willing to undertake any large jobs, and are thoroughly equipped to handle same. Address P. O. Box 493, Leominster, Mass.

MACHINERY AND SUPPLIES

FOR SALE—125 H. P. Side Crank, Taylor Mfg. Co. Steam Engine, thoroughly overhauled, weight with fly wheels 16,000 lbs. Will sell at sacrifice. TOMLIN-HARRIS MACHINE CO., Cordele, Georgia.

TO SELL—Westinghouse D. C. Power Plant, 110 volts, with battery, 3 generators of 1500 watts each. In good and smooth operating shape. Being removed because Power Co. energy available. Will sacrifice. Address H. J. PETTIT, Suffolk, Va.



RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES



BOILERS

FOR SALE

2—520 H.P. B & W Stirling type W.T. boilers, complete with stokers, etc. Have had good care. To be disposed of promptly. For details write

CONS. G. E. L. & P. CO. of BALTIMORE
Purchasing Department, Baltimore, Md.

STEEL BUILDING

80' x 253', 19'11" center to center of columns. Weight 230 tons, exceptional condition, low price to move quick.

ZELNICKER IN ST. LOUIS

Rails, Equipment, Machinery, Oil Engines, Steel Piling, Pipe, etc.

3 PH. 60 CY. GENERATORS

15 KW, 1800 RPM, 120/240 V. Gen. Elec.
50 KW, 1200 RPM, 2300 V. Gen. Elec.
50 KW, 1200 RPM, 230/480 V. Gen. Elec.
62½ KW, 900 RPM, 230/480 V. Elec. Machy. Co.
62½ KW, 900 RPM, 2300 V. Elec. Machy. Co.
187 KVA, 900 RPM, 240/480 V. Gen. Elec.
Large stock motors. Write for list.

V. M. NUSSBAUM & CO., Fort Wayne, Ind.

RANDLE

OFFERS BIG BARGAINS IN

Used and Rebuilt Engine Generator Sets, Turbo Generator Sets, Motors, Rotary Converters, Generators, Motor Generator Sets, Engines, Boilers, Steam and Electric Machinery of all kinds, also Machine Tools. Send for our new machinery list. Yours for the asking. Established 50 years.

The RANDLE MACHINERY CO.

1734 Powers St., Cincinnati, Ohio

BOILERS AT \$2.00 PER H. P.

Butt Strap, High Pressure, H. R. T. Boilers.

6—150 H.P. 150 lbs. steam pressure, Atlanta, Ga.
3—150 H.P. 150 lbs. steam pressure, Augusta, Ga.
3—150 H.P. 150 lbs. steam pressure, Nashville, Tenn.
6—150 H.P. 140 lbs. steam pressure, River Falls, Ala.
6—150 H.P. 130 lbs. steam pressure, Lake, Miss.

These boilers must be moved immediately. We guarantee insurance at above pressure. Write or wire for details.

W. M. SMITH & CO.
Box 1709 Birmingham, Ala.

—TRANSFORMERS—
SALES AND REPAIR SERVICE

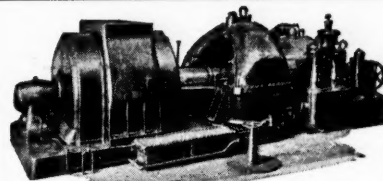
A complete stock of transformers 1 to 1000 kva. Modern methods make our repair service second to none. Special service on breakdown jobs.

Write for Catalog No. 123-E.

The Electric Service Company, Inc.

"America's Used Transformer Clearing House"

212 Walnut St., Cincinnati, Ohio



10,000 KVA Turbo typical of 4 units recently delivered and similar to the following.

PRACTICALLY NEW 100% INTERNAL EXCELLENCE WESTINGHOUSE CONDENSING TURBO UNITS COMPLETE—INSTANT SHIPMENT

1—15,000 KW CW-218 Frame—1800 RPM
1—10,000 KVA CW-118 Frame—1800 RPM
1—7,500 KW CW-78 Frame—1800 RPM
1—5,500 KVA CW-76 Frame—3600 RPM
1—4,000 KVA CW-76 Frame—3600 RPM
2—1,700 KVA CW-26 Frame—3600 RPM
1—1,500 KVA CW-18 Frame—3600 RPM
(3 phase, 60 cycle, standard voltages)

A.S.M.E. CODE DESIGN BOILERS 200-225 lbs.

2—1500 H.P. Cross Drum B & W
2—2650 HP Ladd Bent Tube
5—627 HP Stirling Plant, modern stokers, auxiliaries
3—504 HP B & W Vertical Steel headers, et al.

CONDENSERS MOTOR GENERATOR SETS

Verification and proof of new equivalent condition easily reached on personal inspection
50% to 200% saving on investment

Send us list of your requirements—or what you have for sale

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PUMPS AT REDUCED PRICES

Ready for Immediate Shipment

10 $\frac{1}{4}$ " x 16" "Gould" Triplex Geared, Figure 1585, 12" suction, 10" discharge. Cap. 618 GPM, 250 lb. pres.

7" x 12" "Gould" Triplex Geared, Figure 1638, 6" suction, 6" discharge. Cap. 306 GPM, 250 lbs. pressure.

7" x 8" "Gould" Triplex Geared, 4" suction, 4" discharge.

8" x 10 $\frac{1}{2}$ " "Davis" Triplex Geared, 5" suction, 4" discharge.

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"Gould" Underwriters Fire Pump, 500 GPM, 100 lbs. pressure; DC to 50 HP "G.E." 3 phase, 60 cycle, 220 volt motor, 1750 RPM.

L. F. SEYFERT'S SONS, INC.

Philadelphia, Pa.

"Since 1878"

GENERATOR

200 KVA, 220 volt, 3 phase, 60 cycle, Burke generator direct connected to Filer-Stowell Uniflow engine.

BOILERS

2-125 H.P. locomotive portable, 125 lb. pressure, ASME code.

2-180 H.P. Keeler water tube, 200 lb. pressure, ASME code.

1-150 H.P. 72" x 18' Hor. ret. tubular, 150 lb. pressure, ASME code.

AIR COMPRESSOR

676 cubic foot capacity Ingersoll-Rand Imperial type 10XCB, size 15" and 9 $\frac{1}{4}$ " x 12", 2 stage air compressor, short belt idler drive with 100 H.P. synchronous motor.

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2 $\frac{1}{2}$ " to 12" Curtis & Curtis, belt drive.

2 $\frac{1}{2}$ " to 8" Oster, belt and motor drive.

2 $\frac{1}{2}$ " to 8" Jarecki, belt drive.

2 $\frac{1}{2}$ " to 8" Eaton, Cole & Burnham, belt drive.

1 $\frac{1}{2}$ " to 6" Oster, gasoline engine drive mounted on 4 wheel truck.

1 $\frac{1}{2}$ " to 6" Eaton, Cole & Burnham, belt drive.

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1" to 4" Oster, belt drive.

1 $\frac{1}{2}$ " to 2" "Willie" Williams, motor drive.

1 $\frac{1}{2}$ " to 2" Oster, belt drive.

Several Oster Power Boys, motor and gasoline engine dr. All machines guaranteed condition with regular equipment.

THE O'BRIEN MACHINERY CO.

113 North Third Street

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7-Kewanee self contained return tubular—150 H.P. each—100 lb. pressure. No brickwork required.

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Machine Tools
Power Equipment Boilers
Electric Motors

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148 N. 3rd St. PHILADELPHIA

Reconditioned Used Pipe

Prompt delivery from stock.
Estimates cheerfully furnished on specification work.

MARYLAND PIPE & STEEL CORP.

Ostend and Scott Sts. Baltimore, Md.

**Slashing Cut—
Gregory Prices
Lowest Ever!**

**Electric
Motors**

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Guarantee

Save Money. Buy Now at Rock Bottom. Your choice of tremendous stock—all standard makes, all sizes, a.c. & d.c. and all GREGORY HI-GRADE REBUILT "Good as New."

Send for 80 page Bargain Sheet

GREGORY ELECTRIC CO.
1601 South Lincoln St. Chicago

**PIPE NEW
SECOND HAND**

Overhauled and Tested
New Threads and Couplings
Established 1904

**Albert & Davidson
Pipe Corp.**

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Telephone Sunset 1900

PIPE

Rethreaded, reconditioned, guaranteed, suitable for all practical purposes, furnished with new threads and couplings, 400,000 feet in all sizes from 24" to $\frac{1}{4}$ ".

Also large stock of spiral pipe, sizes 7", 10", 12", 14", 20", and 24".

Large stock of valves and fittings, screwed and flanged. Can make attractive prices.

MARINE METAL & SUPPLY CO.
167 South St., New York City

EQUIPMENT FOR SALE

Nordberg-Carels Diesel Engine—No. 30173. Type 3VE. 330 B.H.P. Speed 225. 3 Cylinder.
General Electric A.C. Generator—No. 2540617. Type AT1. Amps. 675. Speed 225. P.F. .8. Kw. 225. 60 Cycles. 281 kv-a. 240 volts.
General Electric D.C. Generator—No. 1252798. Type RC30. Volt 125. Amp. 104. Speed 1150. Kw. 13.
Fairbanks-Morse Type Y Vertical Oil Engine. Style V. 200 Hp. Speed 245. 4 Cylinder.
Allis-Chalmers Fire Pump. Size 6x4. Type HS-F. No. 19120. 500 G.P.M. 231 feed Hd. 1750 R.P.M. Connected to Allis-Chalmers induction motor. 60 hp., 3 phase, 2200 volt, 1750 speed. Shipping weight 3100 lbs.

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244 Boone Street

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IRON AND STEEL PIPE

Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

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Box 1099 Charleston, W. Va.

Second Hand
and New
Wrought Iron

PIPE

Overhauled
Rethreaded
and Coupled

Also Cut to Sketch

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ALBERT PIPE SUPPLY CO., INC.
NEW-RECLAIMED-USED

PIPE

ALL SIZES CUT TO SKETCH
AND STOCKED

**BERRY & NORTH 13th STS.
BROOKLYN, N.Y.**

GUARANTEED



RAILROAD AND CONTRACTORS' EQUIPMENT



**RELAYING RAILS — SWITCHES
TRACK MATERIAL**

THE PERRY BUXTON DOANE CO.

P. O. Box 5253

Boston, Mass.

NORTHWEST

$\frac{1}{2}$ - $\frac{3}{4}$ - 1 yd. Shovels, Cranes or Draglines
Guaranteed Condition Late Models

HUNTER MACHINERY COMPANY
Department "S"

327 South 16th St., Milwaukee, Wis.

DRAGLINE FOR SALE

A Bucyrus Class 14 Steam Dragline with 60-ft. boom and 2-yard Page bucket, all in good shape, priced to sell.

PITCAIRN BROS., INC.

Allcia, Mich.



RAILROAD AND CONTRACTORS' EQUIPMENT



Shovels or Cranes

FOR SALE OR RENT

Rental Payments may apply on Purchase

1—Factory rebuilt Lima 1½ cu. yd. capacity. This machine can be equipped with either shovel, clamshell, dragline or drag shovel attachments. Very reasonably priced. Carries new machine guarantee. Located at Lima, Ohio.

1—B-2 Erie Steam Shovel, 1 cu. yd. capacity, in very good condition. Located in New Jersey.

Marion No. 32 Electric shovel 1½ cu. yd. 50 H.P. G.E. motor; 3 phase 60 cycle 440 V. Splendid condition. Located New York City.

Complete shovel attachment for Type "O" Thew located Buffalo, N. Y. Also attachment for Type B and B-2 Eries located in New Jersey. Decided bargains.

Osgood steam shovel and crane of 1½ yd. capacity. Very good condition, located New York City.

1—Linn Tractor, 6-yd. capacity, with Waukesha Motor. Machine in very good condition. Priced to sell quickly. Located New York State.

We have both Steam and Gasoline Excavators ranging from ½ to 1½ cu. yd. capacity in various parts of the country that will be sold at extremely low prices or leased with leased payments made applying on purchase price.

CHAS. F. COHEN

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Lima Trust Bldg.
Tel. Main 4824

New York Office:
2351 Graybar Bldg.
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Wire or phone at my expense.

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MANUFACTURERS RECORD
BALTIMORE, MD.

Portable track and locomotives

15—Miles 36" gauge 25 lb. portable industrial track with 7 Riveted ties per 15 ft. section with slip joint tie and Fish plate Connections.

5—Whitcomb 8 ton, 36" Gauge gasoline Locomotives.

Priced low for direct shipment from present location in Florida.

Send for stock list of rebuilt air compressors, cranes, cars, hoists and shovels.

EQUIPMENT CORP'N of AMERICA
1166 So. Washtenaw Ave.,
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Philadelphia

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Pittsburgh

FINISH UP THE JOB!

With One Of These Bargains

—BUY or RENT WITH OPTION TO PURCHASE—

P&H Model 400 Dragline, ¾ yard, in good shape, ready to go. Located at Chicago plant.

Northwest Model 105 1-yard Crane. Fully reconditioned. At Hoboken plant.

P&H Model 206 ¾ yard Shovel. Thoroughly overhauled and in very good operating condition. At Hoboken plant.

Marion No. 32 1 Yard Steam Shovel on full crawlers. Ready for immediate delivery. An exceptional bargain, located at Pittsburgh.

P&H Model 400 ¾ yard Clamshell, 35 foot boom. Has been very carefully reconditioned. At Hoboken plant.

Erie Gas-Air—1 yard Shovel or Crane. In good working order. Will sell cheap. At Chicago plant.

Liberal Terms—Large Stock To Pick From—Write or Wire At Our Expense

EXCAVATING EQUIPMENT DEALERS, INC.

Hoboken, N. J., Los Angeles, Berkeley, Cal., West Allis, Wis., Chicago, Ill.
1706 Willow Ave. 2248 E. 37th St. 2657 Ninth St. 5905 Greenfield Ave. 1040 W. Division St.



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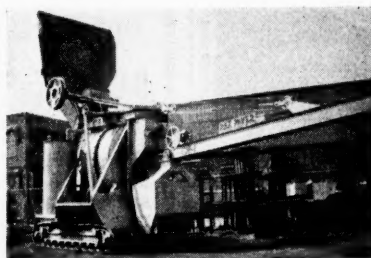
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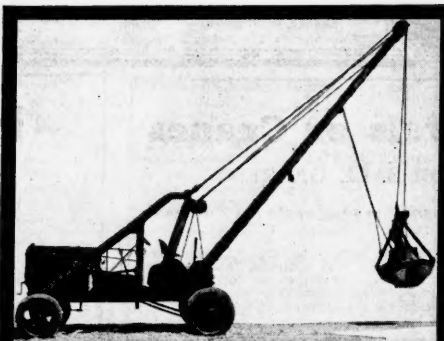
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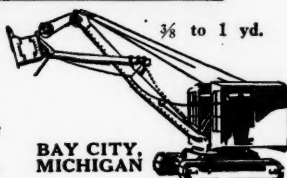


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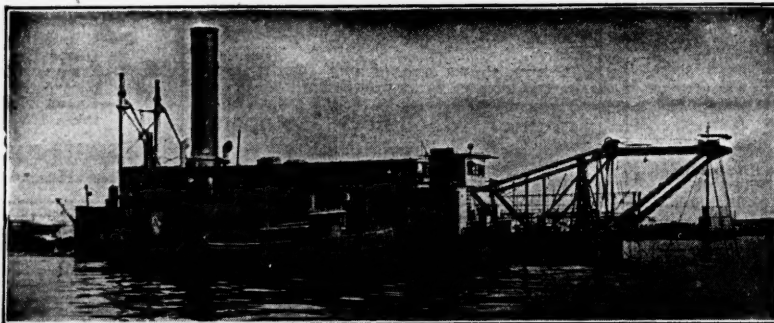
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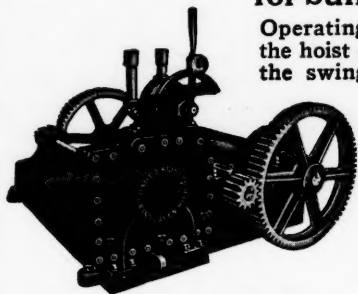
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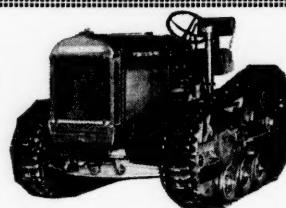
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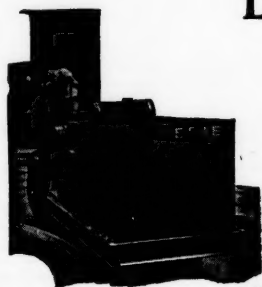
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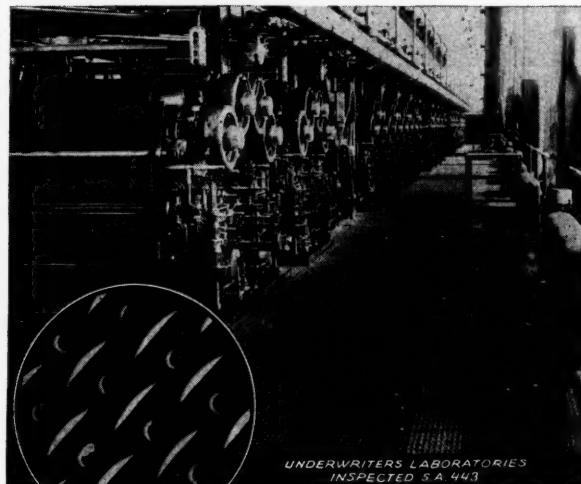
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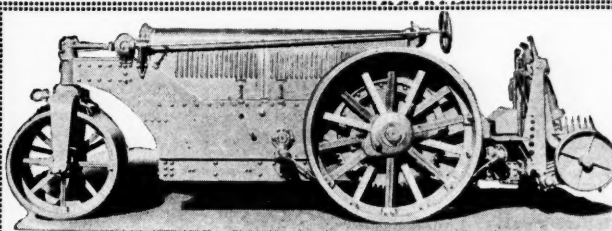
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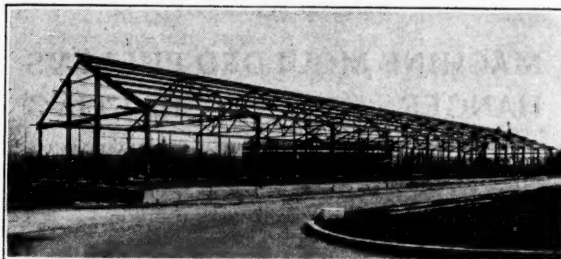
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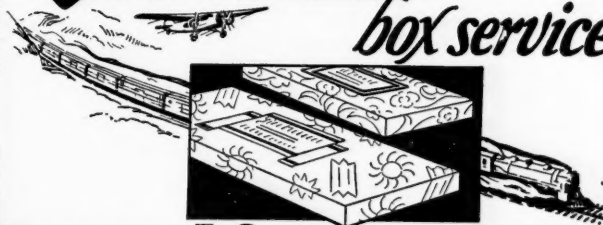
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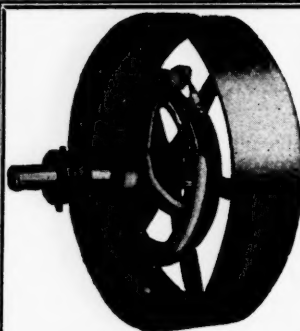
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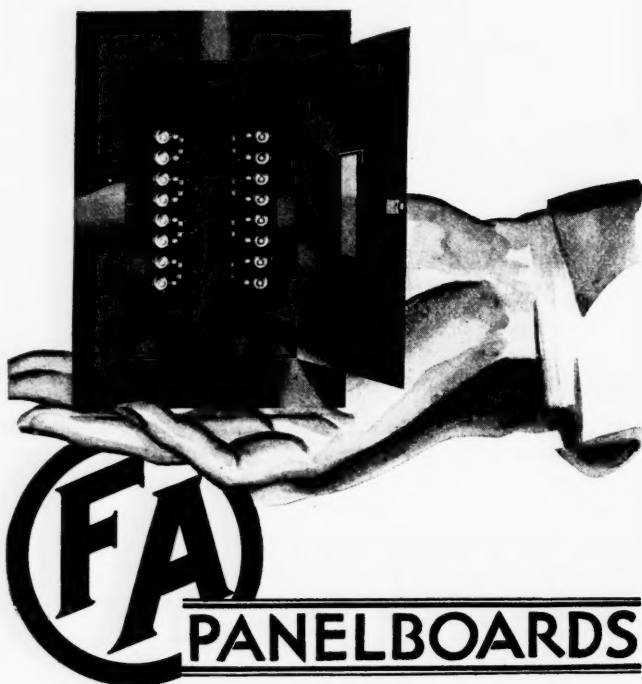
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Gen. Sales Office,
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Vancouver, Can.
Amalgamated Elec.
Co., Ltd.
Granville Island

Winnipeg, Man., Can.
Amalgamated Elec.
Co., Ltd.
677 Notre Dame Ave.

Hamilton, Ont.
Amalgamated Elec.
Co., Ltd.
18 Mary St.

Montreal, Can.
Amalgamated Elec.
Co., Ltd.
1006 Mountain St.

Raymond Bros. Impact Pulverizer Co.,
Chicago, Ill.
Traylor Engr. & Mfg. Co., Allentown, Pa.
Universal Crusher Co., Cedar Rapids, Ia.
W-K-M Co., Inc., Houston, Texas.

CULVERT PIPE (Cast Iron.)
Amer. Cast Iron Pipe Co., Birmingham.
Cast Iron Pipe Research Assn., Chicago.
U. S. Pipe & Foundry Co., Burlington, N.J.

(Corrugated Metal.)
American Sheet & Tin Plate Co., Pitts-
burgh, Pa.

Armco Culvert Mfrs. Assn., Middletown O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Dixie Culvert Mfg. Co., Little Rock, Ark.
Louisiana Corr. Culvert Co., Baton Rouge,
La.

Tenn. Metal Culvert Co., Nashville, Tenn.
Western Metal Mfg. Co., Houston, Texas.

**CURB PROTECTORS. (Steel
Bar.)**
Truscon Steel Co., Youngstown, Ohio.

CUTTERS (Wire Rope.)
Leschen & Sons Rope Co., A., St. Louis.

**CYLINDERS (Compressed Air,
Gas.)**
National Tube Co., Pittsburgh, Pa.

DAMP-PROOFING.
Headley Emulsified Products Co., Phila-
delphia, Pa.

**DERRICKS and Derrick Fit-
tings.**
Lidgerwood Mfg. Co., Elizabeth, N. J.
Sasgen Derrick Co., Chicago, Ill.

(Used.)
Galer Equipment Corp., New York, N. Y.

DESKS (School.)
Andrews Co., A. H., Chicago, Ill.

DITCHING MACHINERY.
Bay City Shovels, Inc., Bay City, Mich.
Harnischfeger Corp., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Industrial Brownhoist Corp., Cleveland, O.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Owen Bucket Co., The, Cleveland, O.

DOORS (Bronze.)
Michels Art Bronze Co., Covington, Ky.

(Fire.)
Merchant & Evans Co., Philadelphia, Pa.
Richards-Wilcox Mfg. Co., Aurora, Ill.

(Fireproof, Air Chamber.)
Wilson Corp., The J. G., New York.

(Kalamain.)
Moeschl-Edwards Corr. Co., Cincinnati.

(Rolling, Steel and Wood.)
Kinnear Mfg. Co., The, Columbus, Ohio.
Moeschl-Edwards Corr. Co., Cincinnati.

(Steel.)
Truscon Steel Co., Youngstown, Ohio.

(Tubular Steel.)
Bayley Co., Wm., Springfield, O.

DRAFTSMEN'S SUPPLIES.
Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.
Bucyrus-Erie Co., Erie, Penna.
Harnischfeger Corp., Milwaukee, Wis.
Monaghan Mfg. Corp., Chicago, Ill.

National Equipment Corp. (Koehring, In-
sley) Milwaukee, Wis.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

Sauerman Bros., Chicago, Ill.
Thew Shovel Co., The, Lorain, Ohio.

Universal Power Shovel Co., Milwaukee,
Wis.

(Walking.)
Monaghan Mfg. Corp., Chicago, Ill.

**DREDGES (Dipper, Elevator,
Hydraulic.)**
Bay City Shovels, Inc., Bay City, Mich.

Bucyrus-Erie Co., Erie, Pa.
Ellicott Machine Corp., Baltimore, Md.
Morris Machine Wks., Baldwinville, N.Y.

**DREDGING (River and Harbor
Improvement.)**
Arundel Corp., The, Baltimore, Md.

Atlantic Gulf and Pacific Co., New York.

(Machinery.)
Ellicott Machine Corp., Baltimore, Md.
Hayward Co., The, New York.

DRILLING CONTRACTORS.
Acker Drill Co., Scranton, Penna.

Mott Core Drilling Co., Huntington, W. Va.
Pennsylvania Drilling Co., Pittsburgh, Pa.

Southern Drilling Co., Saltville, Va.
Sprague & Henwood, Inc., Scranton, Pa.

DRILLS (Artesian Well.)
Virginia Machinery & Well Co., Inc.,
Richmond, Va.

—Hand
Gardner-Denver Co., Quincy, Ill.

(Core, Prospecting, etc.)
Acker Drill Co., Scranton, Penna.

(Electric.)
Gardner-Denver Co., Quincy, Ill.
Sullivan Mch. Co., Chicago.

(Pneumatic.)
Gardner-Denver Co., Quincy, Ill.
Ingersoll-Rand Co., New York, N. Y.

Sullivan Machinery Co., Chicago, Ill.

DRINKING FOUNTAINS.
Rundie-Spence Mfg. Co., Milwaukee, Wis.

DROP-FORGING MACHINERY.
Bliss Co., E. W., Brooklyn, N. Y.

DRYERS (Gravel and Sand.)
Ripley Fdy. & Mch. Co., Ripley, Ohio.

DRY KILNS and Equipment.
Moore Dry Kiln Co., Jacksonville, Fla.

DRYING MACHINERY.
American Process Co., New York, N. Y.

**DUMP TRUCK BODIES and
HOISTS.**
Easton Car & Construction Co., Easton, Pa.

DUST-PROOFING (Concrete.)
Sonneborn Sons, Inc., L., New York.

DYESTUFFS.
Du Pont de Nemours & Co., Inc., E. I.,
Wilmington, Del.

**DYNAMITE (Industrial and Ag-
ricultural.)**
Du Pont de Nemours & Co., Inc., E. I.,
Wilmington, Del.

Hercules Powder Co., Inc., Wilmington, Del.

ECONOMIZERS (Fuel.)
Babcock & Wilcox Co., New York.

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Adam Electric Co., Frank, St. Louis.

General Electric Co., Schenectady, N. Y.
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**—Machinery (Generators, Mo-
tors, etc., New.)**
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.

Howell Electric Motors Co., Howell, Mich.
Rockford Power Machy. Co., Rockford, Ill.

Westinghouse Electric & Mfg. Co., E.
Pittsburgh, Pa.

**—Machinery (Generators, Mo-
tors, etc., Used.)**
Delta Equipment Co., Philadelphia, Pa.

Electric Service Co., Cincinnati, Ohio.
General Electric Co., Schenectady, N. Y.

Gregory Electric Co., Chicago.
Nashville Industrial Corp., Old Hickory,
Tenn.

Nussbaum & Co., V. M., Ft. Wayne, Ind.
O'Brien Machinery Co., The, Phila., Pa.

Randle Machinery Co., The, Cincinnati, O.
Rockford Power Machy. Co., Rockford, Ill.

**—Machinery Repairing (Mo-
tors, Generators, etc.)**
Electric Service Co., Cincinnati, Ohio.

Gregory Electric Co., Chicago.

ELECTRIC LIGHTING.
General Electric Vapor Lamp Co.,
Hoboken, N. J.

**ELECTRIC SHOVELS (See
Shovels.)**

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Leschen & Sons Rope Co., A., St. Louis.

(Equalizers.)
Evans Elevator Equalizer Co., Bedford, Ind.

ELEVATORS (Electric.)
American Elevator & Machine Co., Inc.,
Louisville, Ky.

Miller Co., St. Louis, Mo.

(Hand and Belt Power.)
American Elevator & Machine Co., Inc.,
Louisville, Ky.

Miller Co., St. Louis, Mo.

(Hydraulic.)
American Elevator & Machine Co., Inc.,
Louisville, Ky.

ENGINEERS (Airports.)
MacElwee & Crandall, Inc., Cambridge,
Mass.

Shaw Co., Russell B., St. Louis, Mo.

(Appraisal.)
Ballinger Co., Philadelphia, Pa.
Battey & Kipp, Inc., Chicago, Ill.

Fay, Spofford & Thorndike, Boston, Mass.
 Ford, Bacon & Davis, Inc., New York.
 Lockwood Greene Engrs., Inc., New York.
 Main, Inc., Chas. T., Boston, Mass.
 Sanderson & Porter, New York, N. Y.
 Wadleigh & Bailey, Washington, D. C.
 White Engineering Corp., J. G., New York.

Whitman, Requaardt & Smith, Balto., Md.
 Wiedeman and Singleton, Inc., Atlanta.
 Williamson, Lee H., Charlottesville, Va.

—(Aviation.)

Shaw Co., Russell B., St. Louis, Mo.

—(Bridge.)

Atlantic Bridge Co., Greensboro, N. C.
 Billingsley, James W., New Orleans, La.
 Fay, Spofford & Thorndike, Boston, Mass.
 Freeland, Roberts & Co., Nashville, Tenn.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.
 Hardaway Contracting Co., Columbus, Ga.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Howerton Engineering Co., Asheville, N. C.
 Steel & Leiby, Knoxville, Tenn.
 Turner, C. A. P., Minneapolis, Minn.
 Virginia Bridge & Iron Co., Roanoke, Va.
 Wheeler, Walter H., Minneapolis, Minn.
 Whitman, Requaardt & Smith, Balto., Md.

—(Chemical.)

Barrow-Agee Laboratories, Memphis, Tenn.
 Dow & Smith, New York, N. Y.
 Flood & Co., Walter H., Chicago, Ill.
 Picard Laboratories, Birmingham, Ala.
 Pittsburgh Testing Laboratories, Pittsburgh, Pa.
 Southern Products Corp., New Orleans.

—(Civil.)

Airmap Corp. of Amer., Brooklyn, N. Y.
 Battery & Kipp, Inc., Chicago, Ill.
 Charlton & Davis, Ft. Lauderdale, Fla.
 Fuller & McClintock, New York, N. Y.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.
 Harrub Engr. Co., C. N., Nashville, Tenn.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Hills Co., George B., Jacksonville, Fla.
 MacElwee & Crandall, Inc., Cambridge, Mass.
 Main, Inc., Chas. T., Boston, Mass.
 Spoon & Lewis, Greensboro, N. C.
 Spring, Charles Herbert, Greensboro, N. C.
 Steel & Leiby, Knoxville, Tenn.
 White Engineering Corp., J. G., New York.
 Whitman, Requaardt & Smith, Balto., Md.

—(Consulting.)

Airmap Corp. of Amer., Brooklyn, N. Y.
 Barstow & Co., W. S., Reading, Pa.
 Charlton & Davis, Ft. Lauderdale, Fla.
 Converse & Co., J. B., Mobile, Ala.
 Engineering Service Corp., Houston, Tex.
 Harza Engineering Co., Chicago.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Herty, Charles H., New York City.
 Lockwood Greene Engrs., Inc., New York.
 Main, Inc., Chas. T., Boston, Mass.
 Smith, Elroy G., Augusta, Ga.
 Stillman & Van Sieten, New York, N. Y.
 Wadleigh & Bailey, Washington, D. C.
 White Engineering Corp., J. G., New York.
 Whitman, Requaardt & Smith, Balto., Md.
 Wiedeman & Singleton, Inc., Atlanta, Ga.
 Williamson, Lee H., Charlottesville, Va.

—(Dams.)

Alpaugh & Sons, Chas. W., Manassas, Va.
 Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering & Management Corp., Chicago, Ill.
 Flood & Co., Walter H., Chicago, Ill.
 Gardner & Howe, Memphis, Tenn.
 Hardaway Contracting Co., Columbus, Ga.
 Harza Engineering Co., Chicago.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Lee, William S., Charlotte, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Sillrine & Co., J. E., Greenville, S. C.
 Tucker & Laxton, Charlotte, N. C.
 Wheeler, Walter H., Minneapolis, Minn.
 White Engineering Corp., J. G., New York.

—(Drainage and Irrigation.)

Flood & Co., Walter H., Chicago, Ill.
 Ford, Bacon & Davis, Inc., New York.
 Fuller & McClintock, New York, N. Y.
 Hills Co., George B., Jacksonville, Fla.
 Huey, S. E., Monroe, La.

—(Efficiency.)

Barstow & Co., W. S., Reading, Pa.
 Ernst & Ernst, New York, N. Y.
 Whitman, Requaardt & Smith, Balto., Md.

—(Electrical.)

Battery & Kipp, Inc., Chicago, Ill.
 Engineering Service Corp., Houston, Tex.
 Hoosier Engineering Co., Chicago, Ill.
 Lee, William S., Charlotte, N. C.
 Lockwood Greene Engrs., Inc., New York.
 Main, Inc., Chas. T., Boston, Mass.
 Mullergren, Arthur L., Kansas City, Mo.
 Sanderson & Porter, New York, N. Y.
 Stone & Webster, Inc., Boston, Mass.
 Tucker & Laxton, Charlotte, N. C.
 Webb Electric Co., Anderson, S. C.
 White Co., Gilbert C., Durham, N. C.
 Wiley & Wilson, Lynchburg, Va.

—(Electric-Light and Power Plants.)

Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering & Management Corp., Chicago, Ill.
 Ford, Bacon & Davis, Inc., New York.
 Lee, William S., Charlotte, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Mullergren, Arthur L., Kansas City, Mo.

Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Stone & Webster, Inc., Boston, Mass.
 Tucker & Laxton, Charlotte, N. C.
 White Engineering Corp., J. G., New York.
 White Co., Gilbert C., Durham, N. C.

—(Flood Control.)

Flood & Co., Walter H., Chicago, Ill.
 Harza Engineering Co., Chicago.

—(Forest.)

Lacey & Co., Jas. D., New York, N. Y.

—(Gas.)

Byllesby Engineering & Management Corp., Chicago, Ill.
 Ford, Bacon & Davis, Inc., New York.
 Huey, S. E., Monroe, La.

—(Geological.)

De Kalb, Courtenay, New York City.
 Froehling & Robertson, Richmond, Va.
 Wadleigh & Bailey, Washington, D. C.
 Withers, R. S., Jackson, Miss.

—(Harbor Improvements.)

Billingsley, James W., New Orleans, La.
 Engineering Service Corp., Houston, Tex.
 Fay, Spofford & Thorndike, Boston, Mass.

—(Heating.)

Battery & Kipp, Inc., Chicago, Ill.
 Wiley & Wilson, Lynchburg, Va.

—(Hydraulic.)

Alpaugh & Sons, Chas. W., Manassas, Va.
 Flood & Co., Walter H., Chicago, Ill.
 Fuller & McClintock, New York, N. Y.
 Harza Engineering Co., Chicago.
 Main, Inc., Chas. T., Boston, Mass.
 Whitman, Requaardt & Smith, Balto., Md.

—(Hydro-electric.)

Alpaugh & Sons, Chas. W., Manassas, Va.
 Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering & Management Corp., Chicago, Ill.
 Harza Engineering Co., Chicago.
 Lee, William S., Charlotte, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Mees & Mees, Charlotte, N. C.
 Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Sillrine & Co., J. E., Greenville, S. C.
 Tucker & Laxton, Charlotte, N. C.
 White Engineering Corp., J. G., New York.
 Whitman, Requaardt & Smith, Balto., Md.

—(Ice and Refrigerating.)

Engineering Service Corp., Houston, Tex.

—(Industrial Plants.)

Ballinger Corp., Philadelphia, Pa.
 Barstow & Co., W. S., Reading, Pa.
 Battery & Kipp, Inc., Chicago, Ill.
 Billingsley, James W., New Orleans, La.
 Charleston Constructors, Inc., Charleston, S. C.

Conner, Older & Quinlan, Inc., Chicago.
 Converse & Co., J. B., Mobile, Ala.
 Fay, Spofford & Thorndike, Boston, Mass.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.
 Herty, Charles H., New York City.
 Hills Co., George B., Jacksonville, Fla.
 Lockwood Greene Engrs., Inc., New York.
 MacElwee & Crandall, Inc., Cambridge, Mass.

Main, Inc., Chas. T., Boston, Mass.
 Mees & Mees, Charlotte, N. C.
 Morgan Constr. Co., Worcester, Mass.
 Mullergren, Arthur L., Kansas City, Mo.
 Preacher & Co., Inc., G. Lloyd, Atlanta.

Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Sillrine & Co., J. E., Greenville, S. C.
 Smith, Elroy G., Augusta, Ga.
 Stone & Webster, Inc., Boston, Mass.
 Turner, C. A. P., Minneapolis, Minn.
 Widmer Engineering Co., St. Louis, Mo.
 Williamson, Lee H., Charlottesville, Va.

—(Industrial Survey.)

Converse & Co., J. B., Mobile, Ala.
 Herty, Charles H., New York City.
 Lockwood Greene Engrs., Inc., New York.
 Wadleigh & Bailey, Washington, D. C.

—(Inspection and Tests.)

Barrow-Agee Laboratories, Memphis, Tenn.
 Conard & Buzby, Burlington, N. J.
 Dow & Smith, New York, N. Y.
 Flood & Co., Walter H., Chicago, Ill.
 Froehling & Robertson, Inc., Richmond, Va.
 Hunt Co., Robert W., Chicago, Ill.
 Picard Laboratories, Birmingham, Ala.
 Pittsburgh Testing Laboratories, Pittsburgh, Pa.
 Southwestern Laboratories, Ft. Worth, Tex.

—(Landscapes.)

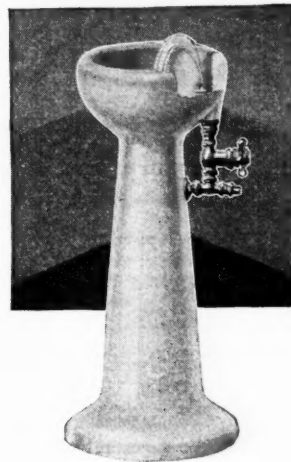
Draper, E. S., Charlotte, N. C.

—(Lighting.)

Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering & Management Corp., Chicago, Ill.
 Ford, Bacon & Davis, Inc., New York.
 General Electric Vapor Lamp Co., Hoboken, N. J.
 Wiley & Wilson, Lynchburg, Va.

—(Mechanical.)

Battery & Kipp, Inc., Chicago, Ill.
 Charlton & Davis, Ft. Lauderdale, Fla.
 Engineering Service Corp., Houston, Tex.
 Lee, William S., Charlotte, N. C.
 Lockwood Greene Engrs., Inc., New York.
 Main, Inc., Chas. T., Boston, Mass.
 Mees & Mees, Charlotte, N. C.
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Consoer, Older & Quinlan, Inc., Chicago.
Dow & Smith, New York, N. Y.
Harrub Engr. Co., C. N., Nashville, Tenn.
Hills Co., George B., Jacksonville, Fla.
Howerton Engineering Co., Asheville, N.C.
Huey, S. E., Monroe, La.
Knowles, Inc., Morris, Pittsburgh, Pa.
McCrary Co., The, J. B., Atlanta, Ga.
Spoon & Lewis, Greensboro, N. C.
White Co., Gilbert C., Durham, N. C.

—(Paving and Roads.)

Billingsley, James W., New Orleans, La.
Dow & Smith, New York, N. Y.
Freeland, Roberts & Co., Nashville, Tenn.
Harrub Engr. Co., C. N., Nashville, Tenn.
Howerton Engineering Co., Asheville, N.C.
Spoon & Lewis, Greensboro, N. C.
White Co., Gilbert C., Durham, N. C.

—(Production.)

Scodfield Engr. Co., Phila., Pa.

—(Public Service Properties.)

Byllesby Engineering & Management
Corp., Chicago, Ill.
Ford, Bacon & Davis, Inc., New York.
Fuller & McClintock, New York, N. Y.
Knowles, Inc., Morris, Pittsburgh, Pa.
Main, Inc., Chas. T., Boston, Mass.
Sanderson & Porter, New York, N. Y.
Scodfield Engineering Co., Phila., Pa.
Stone & Webster, Inc., Boston, Mass.
White Engineering Corp., J. G., New York.

—(Railroad.)

Huey, S. E., Monroe, La.
Mees & Mees, Charlotte, N. C.

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Ballinger Co., Philadelphia, Pa.
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Fay, Spofford & Thorndike, Boston, Mass.
Freeland, Roberts & Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Greiner & Co., J. E., Baltimore, Md.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Steel & Leiby, Knoxville, Tenn.
Tucker & Laxton, Charlotte, N. C.
Turner, C. A. P., Minneapolis, Minn.
Wheeler, Walter H., Minneapolis, Minn.

—(Sanitary.)

Harza Engineering Co., Chicago.
Whitman, Requaardt & Smith, Balto., Md.

—(Sewage Disposal Plants.)

Fuller & McClintock, New York, N. Y.
McCrary Co., The, J. B., Atlanta, Ga.
Whitman, Requaardt & Smith, Balto., Md.
Wiedeman and Singleton, Inc., Atlanta.

—(Sewerage and Waterworks.)

Conard & Buzby, Burlington, N. J.
Consoer, Older & Quinlan, Inc., Chicago.
Ford, Bacon & Davis, Inc., New York.
Fuller & McClintock, New York, N. Y.
Hardaway Contracting Co., Columbus, Ga.
Harrub Engr. Co., C. N., Nashville, Tenn.
Hills Co., George B., Jacksonville, Fla.
Howerton Engineering Co., Asheville, N.C.
Knowles, Inc., Morris, Pittsburgh, Pa.
Mees & Mees, Charlotte, N. C.
Sanderson & Porter, New York, N. Y.
Spoon & Lewis, Greensboro, N. C.
Tucker & Laxton, Charlotte, N. C.
White Co., Gilbert C., Durham, N. C.
White Engineering Corp., J. G., New York.
Whitman, Requaardt & Smith, Balto., Md.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Williamson, Lee H., Charlottesville, Va.

—(Structural.)

Freeland, Roberts & Co., Nashville, Tenn.
Hedrick, Inc., Ira G., Hot Springs Nat'l.
Park, Ark.
Hills Company, Geo. B., Jacksonville, Fla.
Huey, S. E., Monroe, La.
Lockwood Greene Engrs., Inc., New York.
Turner, C. A. P., Minneapolis, Minn.
Virginia Bridge & Iron Co., Roanoke, Va.
Whitman, Requaardt & Smith, Balto., Md.

—(Textile Mills.)

Ballinger Co., Philadelphia, Pa.
Lockwood Greene, Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Silline & Co., J. E., Greenville, S. C.

—(Transmission Lines.)

Hoosier Engineering Co., Chicago, Ill.

—(Ventilating and Heating.)

Wiley & Wilson, Lynchburg, Va.

—(Water Supply.)

Floyd & Lochridge, Dallas, Texas.
Whitman, Requaardt & Smith, Balto., Md.

ENGINES (Compressed Air.)

Dake Engine Co., Grand Haven, Mich.

—(Diesel Type.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Gas and Gasoline.)

Novo Engine Co., Lansing, Mich.
Sterling Engine Co., Buffalo, N. Y.

—(Hoisting.)

Mundy Hoisting Engine Co., J. S., New-
ark, N. J.

—(Marine.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Oil.)

Ingersoll-Rand Co., New York, N. Y.
Continental Gin Co., Birmingham, Ala.

—(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Cole Mfg. Co., B. D., Newnan, Ga.
Leffel & Co., James, Springfield, O.
Lombard Iron Works & Supply Co., Au-
gusta, Ga.
Morris Machine Works, Baldwinville, N.Y.
Schodfield's Sons Co., J. S., Macon, Ga.

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Spring, Charles Herbert, Greensboro, N.C.

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Bucyrus-Erie Co., Erie, Penna.
Harnischfeger Corp., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Industrial Brownhoist Corp., Cleveland.
Monaghan Mfg. Corp., Chicago, Ill.
National Equipment Corp. (Koehring,
Inley, Parsons), Milwaukee, Wis.
Northwest Engineering Co., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Thew Shovel Co., The, Lorain, Ohio.
Universal Power Shovel Co., Milwaukee,
Wis.

EXCAVATORS (Clamshell and Orange Peel.)

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Thew Shovel Co., Lorain, Ohio.

—(Dragline. See Dragline Ex- cavators.)

—(Trench.)

Bay City Shovels, Inc., Bay City, Mich.
Bucyrus-Erie Co., Erie, Penna.
Harnischfeger Corp., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Monaghan Mfg. Corp., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Universal Power Shovel Co., Milwaukee,
Wis.

EXPLOSIVES.

Du Pont de Nemours & Co., Inc., E. I.,
Wilmington, Del.
Hercules Powder Co., Inc., Wilmington, Del.

FACTORY Management Systems.

Ernst & Ernst, New York, N. Y.

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American Water Softener Co., Phila., Pa.

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Ayer & Lord Tie Co., Chicago, Ill.

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Anchor Post Fence Co., Baltimore, Md.
Cyclone Fence Co., Waukegan, Ill.
Gulf States Steel Co., Birmingham, Ala.
Page Fence Association, Chicago, Ill.
Stewart Iron Works Co., Cincinnati, O.

—(Field and Industrial, Wire Woven.)

American Steel and Wire Co., Balto., Md.
Anchor Post Fence Co., Baltimore, Md.
Cyclone Fence Co., Waukegan, Ill.
Gulf States Steel Co., Birmingham, Ala.
Page Fence Association, Chicago, Ill.
Stewart Iron Works Co., Cincinnati, O.

FERTILIZER MACHINERY.

Raymond Bros., Impact Pulv. Co., Chicago.

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International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.), Pa.
Scaife & Sons Co., Wm. B., Oakmont, Pa.

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Newark Wire Cloth Co., Newark, N. J.

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Akers, William, Atlanta, Ga.
Electric Bond & Share Co., New York.
Garraway & Co., S. G., Chicago.
Gay & Co., W. O., New York, N. Y.

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North American Refractories Co., Cleve-
land, Ohio.

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Myers & Bro. Co., The F. E., Ashland, O.

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Bannon Pipe Co., Louisville, Ky.

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Moeschl-Edwards Corr. Co., Cincinnati, O.
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Wilson Corp., The J. G., New York City.

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Leschen & Sons Rope Co., A., St. Louis.

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Dart Mfg. Co., E. M., Providence, R. I.
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Nashville Hardwood Flooring Co., Nashville, Tenn.

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Irving Iron Works Co., Long Is. City, N. Y.
Kerlow Steel Flooring Co., Jersey City, N. J.

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Republic Steel Corp., Youngstown, Ohio.

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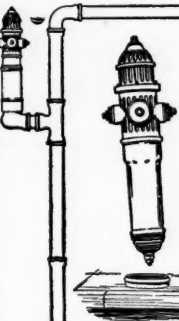
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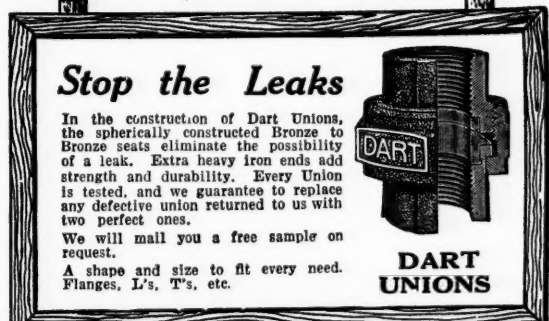
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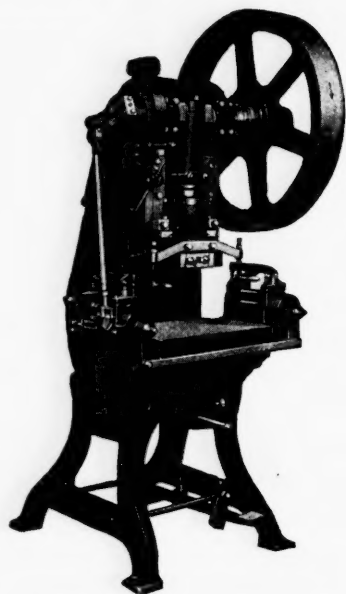
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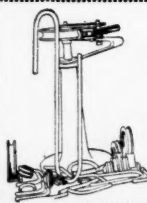
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National Paving Brick Mfrs. Asso., Washington, D. C.

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National Equipment Corp. (Koehring, T. L. Smith), Milwaukee, Wis.

(Plant (Asphalt.)

Simplicity System Co., Chattanooga, Tenn.

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Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Smith Co., S. Morgan, York, Pa.

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Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.

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McLanahan-Stone Machine Co., Hollidaysburg, Pa.

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Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.
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Amer. Creosoting Co., Inc., Louisville.
Ayer & Lord Tie Co., Inc., Chicago.
Carolina Wood Preserving Co., Charleston, S. C.
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Carnegie Steel Co., Pittsburgh, Pa.

Zelmecker Supply Co., W. A., St. Louis.

(Yellow Pine.)

Jackson Lumber Co., Lockhart, Ala.

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Goldens' Fdry. & Mch. Co., Columbus, Ga.

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Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.
Arno Culvert Mfrs. Asso., Middletown, O.
Birmingham Boiler & Engr. Co., Birmingham, Ala.
Central Pipe & Supply Co., Charleston, W. Va.
Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.
Hudson Pipe & Supply Co., Bayonne, N. J.
Maryland Pipe & Steel Corp., Baltimore, Md.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Power Piping Co., Pittsburgh, Pa.

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Amer. Cast Iron Pipe Co., Birmingham.
Cast Iron Pipe Research Assn., Chicago.
Central Foundry Co., The, New York, N. Y.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
U. S. Pipe & Foundry Co., Burlington, N. J.

(Dredge.)

Abendroth & Root Mfg. Co., New York.

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National Tube Co., Pittsburgh, Pa.

(Iron and Steel.)

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

(Riveted.)

Abendroth & Root Mfg. Co., New York.

(Second-Hand.)

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Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Central Pipe & Sup. Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.

Hudson Pipe & Supply Co., Bayonne, N. J.

Marine Metal & Supply Co., New York.

Maryland Pipe & Steel Corp., Baltimore, Md.

(Spiral Riveted.)

Abendroth & Root Mfg. Co., New York.

Taylor Forge & Pipe Wks., Chicago, Ill.

(Steel.)

Bethlehem Steel Co., Bethlehem, Pa.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Power Piping Co., Pittsburgh, Pa.
Republic Steel Corp., Youngstown, Ohio.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

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Welded Products Co. of La., Inc., New Orleans, La.

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(Machinery (Concrete.)

Quinn Wire & Iron Works, Boone, Iowa.

(Unions and Joints.)

Dart Mfg. Co., E. M., Providence, R. I.

(Systems (Industrial.)

Grinnell Co., Inc., Providence, R. I.

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Power Piping Co., Pittsburgh, Pa.

PLATES (Steel.)

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Carnegie Steel Co., Pittsburgh, Pa.

Central Iron & Steel Co., Harrisburg, Pa.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Granite City Steel Co., Granite City, Ill.

Gulf States Steel Co., Birmingham, Ala.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Tennessee Coal, Iron & Railroad Co., Birmingham.

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Ingersoll-Rand Co., New York, N. Y.

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Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer & Lord Tie Co., Inc., Chicago.

Brown Wood Preserving Co., Louisville, Ky.

Carolina Wood Preserving Co., Charleston, S. C.

Savannah Creosoting Co., Savannah, Ga.

Taylor-Colquitt Co., Spartanburg, S. C.

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National Tube Co., Pittsburgh, Pa.

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Jackson Lumber Co., Lockhart, Ala.

(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York City.

POLISHING MACHINERY.

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Carborundum Co., Niagara Falls, N. Y.

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Braden Steel Corp., Tulsa, Okla.

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Duplex Hanger Co., Cleveland, Ohio.

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Diamond Chain & Mfg. Co., Indianapolis.

Goldens' Fdry. & Mch. Co., Columbus, Ga.

O'Brien Machinery Co., Phila., Pa.

Scheldt's Sons Co., J. S., Macon, Ga.

Wood's Sons Co., T. B., Chambersburg, Pa.

(Pumps.)

Luitwieler Pumping Engine Co., Rochester, N. Y.

PREHEATERS (Air.)

Combustion Engr. Corp., New York City.

PRESSES, (Baling, Cottonseed Oil, Hydraulic and Power.)

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

Ripley Foundry & Machine Co., Ripley, O.

Tomlin-Harris Machine Co., Cordele, Ga.

(Metal Stamping.)

Bliss Co., E. W., Brooklyn, N. Y.

PRINTERS (Book, Catalog, Job.)

Smith & Son Co., Oscar T., Baltimore, Md.

Young & Selden Co., Baltimore, Md.

PRODUCER (Gas Machines.)

Gas-O-Flame Stove Wks., Port Deposit, Md.
Morgan Construction Co., Worcester, Mass.
Wood & Co., R. D., Phila., Pa.

PULLEYS (Friction Clutch.)

Caldwell Co., Inc., W. E., Louisville, Ky.
Wood's Sons Co., T. B., Chambersburg, Pa.

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American Pulley Co., Philadelphia, Pa.

—(Steel Split.)

American Pulley Co., Philadelphia, Pa.

—Shafting and Hangers.

American Pulley Co., Philadelphia, Pa.
Goldens' Pdy. & Mch. Co., Columbus, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.

PULVERIZED COAL EQUIPMENT.

Combustion Engr. Corp., New York, N. Y.
Fuller Lehigh Co., Fullerton, Pa.
Whiting Corp., Harvey, Ill.

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Chain Belt Co., Milwaukee, Wis.
Cook, Inc., A. D., Lawrenceburg, Ind.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Luitwieler Pumping Engine Co., Rochester, N. Y.
Myers & Bro. Co., The F. E., Ashland, O.
National Equipment Corp., (C. H. & E. Division), Milwaukee, Wis.
Platt Iron Works, Dayton, Ohio.
Viking Pump Co., Cedar Falls, Iowa.
Virginia Mch. & Well Co., Richmond, Va.

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Manistee Iron Works Co., Manistee, Mich.

—(Air Lift.)

Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

—(Boiler Feed.)

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
DeLaval Steam Turbine Co., Trenton, N. J.
Erie Pump & Engine Wks., Medina, N. Y.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Manistee Iron Works Co., Manistee, Mich.
Myers & Bro. Co., The F. E., Ashland, O.

—(Centrifugal.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
DeLaval Steam Turbine Co., Trenton, N. J.
Erie Pump & Engine Wks., Medina, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Jaeger Machine Co., Columbus, Ohio.
Layne & Bowler, Inc., Memphis, Tenn.
Manistee Iron Works Co., Manistee, Mich.
Morris Machine Wks., Baldwinsville, N. Y.
Novo Engine Co., Lansing, Mich.

—(Contractors.)

Erie Pump & Engine Wks., Medina, N. Y.
Novo Engine Co., Lansing, Mich.

—(Deep Well.)

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Layne & Bowler, Inc., Memphis, Tenn.
Luitwieler Pumping Engine Co., Rochester, N. Y.
Novo Engine Co., Lansing, Mich.

—(Diaphragm.)

Novo Engine Co., Lansing, Mich.

—(Hydraulic.)

Dunning & Roschert Press Co., Inc., Syracuse, N. Y.

—(Power.)

Platt Iron Works, Dayton, Ohio.
Sterling Engine Co., Buffalo, N. Y.

—(Pulverized Coal.)

Fuller Lehigh Co., Fullerton, Pa.

—(Rotary.)

Viking Pump Co., Cedar Falls, Iowa.

—(Sand and Dredging.)

Ellicott Machine Corp., Baltimore, Md.
Erie Pump & Engine Wks., Medina, N. Y.
Georgia Iron Works, Augusta, Ga.

—(Steam.)

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Works), New York, N. Y.
Platt Iron Works, Dayton, Ohio.

—(Vacuum.)

Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

—(Water Works.)

Layne & Bowler, Inc., Memphis, Tenn.
Manistee Iron Works Co., Manistee, Mich.

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Whitney Metal Tool Co., Rockford, Ill.

RAOK RAKES.

Newport, News Shipbuilding & Drydock Co., Newport News, Va.

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Whiting Corp., Harvey, Ill.

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Levis & Co., Henry, Philadelphia, Pa.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron and Equip. Co., Atlanta, Ga.
Zelnicker Supply Co., W. A., St. Louis

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Koppel Ind. Car & Equip. Co., Koppel, Pa.
Robinson & Orr, Pittsburgh, Pa.

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Missouri-Kansas-Texas Lines, Dallas, Tex.
Model Land Company, Flagler System, St. Augustine, Fla.
Norfolk & Western Railway, Roanoke, Va.
Tennessee Central Railway, Nashville.

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Carnegie Steel Co., Pittsburgh, Pa.
Levis & Co., Henry, Philadelphia, Pa.
Perry, Buxton, Doane Co., Philadelphia, Pa.
Robinson & Orr, Pittsburgh, Pa.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron & Equip. Co., Atlanta, Ga.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Zelnicker Supply Co., W. A., St. Louis

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Koppel Ind. Car & Equip. Co., Koppel, Pa.

—(Marine.)

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Connors Steel Co., Birmingham, Ala.
Dietrich Brothers, Baltimore, Md.
Gulf States Steel Co., Birmingham, Ala.
Knoxville Iron Co., Knoxville, Tenn.
Byerson & Son, Inc., Jos. T., St. Louis and New York.
Southern Engineering Co., Charlotte, N. C.
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Stonhard Co., Phila., Pa.

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Biggs Boiler Works, Akron, Ohio.

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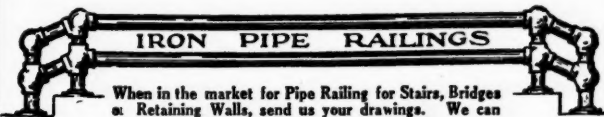
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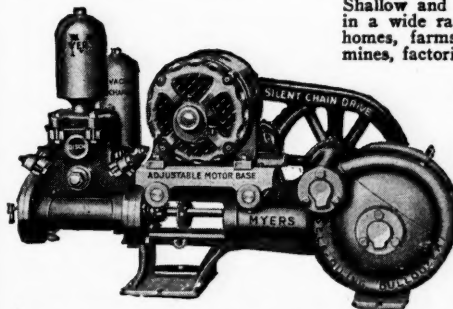
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burgh, Pa.

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Milcor Steel Co., Milwaukee, Wis.

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Republic Steel Corp., Youngstown, Ohio

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Truscon Steel Co., Youngstown, Ohio

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Friend & Co., Inc., Petersburg, Va.

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Rundie-Spence Mfg. Co., Milwaukee, Wis.

SASH (Industrial.)

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Schofield's Sons Co., J. S., Macon, Ga.

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Patent Scaffolding Co., Chicago, Ill.

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Sauerman Bros., Chicago, Ill.

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Hunts Sons, M. J., Philadelphia, Pa.

Perry, Buxton, Doane Co., Philadelphia.

Smith & Co., W. M., Birmingham, Ala.

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Seneca Wire & Mfg. Co., Fostoria, Ohio.

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Erdie Perforating Co., Rochester, N. Y.

Hendrick Mfg. Co., Carbondale, Pa.

Ludlow Saylor Wire Co., St. Louis, Mo.

McLanahan-Stone Machine Co., Hollidays-

burg, Pa.

Mundt & Sons, Charles, Jersey City, N. J.

Universal Crusher Co., Cedar Rapids, Ia.

—(Sifting.)

Newark Wire Cloth Co., Newark, N. J.

SCREW-Machine Products.

Progressive Mfg. Co., Torrington, Conn.

SCREWS (Machine.)

Progressive Mfg. Co., Torrington, Conn.

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—Pipe (Vitrified.)

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Dee Co., Wm. E., Oak Hill, Ohio.

Lee Clay Products Co., Clearfield, Ky.

Owensboro Sewer Pipe Co., Owensboro, Ky.

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(Concrete.)

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Yoder Co., The, Cleveland, Ohio.

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Atlanta and West Point R. R., Atlanta

Central of Georgia Rwy., Savannah, Ga.

Central Power & Light Co., San Antonio.

Fort Worth Chamber of Commerce, Fort
Worth, Texas.

Galveston, City of, Galveston, Texas.
Georgia Power Co., Atlanta, Ga.
Jacksonville, City of, Jacksonville, Fla.
Missouri-Kansas-Texas Lines, Dallas, Tex.
Model Land Company, (Flagler System),
St. Augustine, Fla.
Norfolk-Portsmouth Ch. of Commerce Nor-
folk, Va.
Norfolk & Western Railway, Roanoke, Va.
Tennessee Central Railway, Nashville.
Texas Power & Light Co., Dallas, Texas.

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Milcor Steel Co., Milwaukee, Wis.

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Federal-American Cement Tile Co., Chi-
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—(Concrete Roof.)
Federal-American Cement Tile Co., Chi-
cago, Ill.

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Sloss-Sheffield Steel and Iron Co., Bir-
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Woodstock Slag Corp., Birmingham, Ala.

—(Furnace.)
Sloss-Sheffield Steel and Iron Co., Bir-
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Woodstock Slag Corp., Birmingham, Ala.

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Woodhouse Chain Works, Trenton, N. J.

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Roebbling's Sons Co., John A., Trenton, N.J.

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Eichley, Jr. Co., John, Pittsburgh, Pa.
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McClintic-Marshall Co., Pittsburgh, Pa.
Phoenix Iron Co., The, Phila., Pa.
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Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chatta-
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Ingalls Iron Works Co., Birmingham, Ala.
Phoenix Iron Co., The, Phila., Pa.
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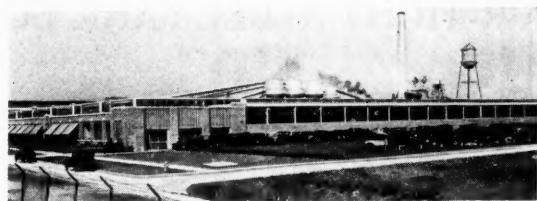
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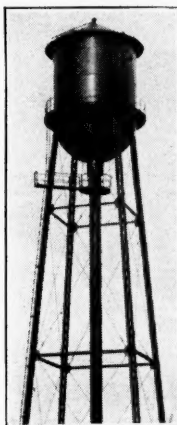
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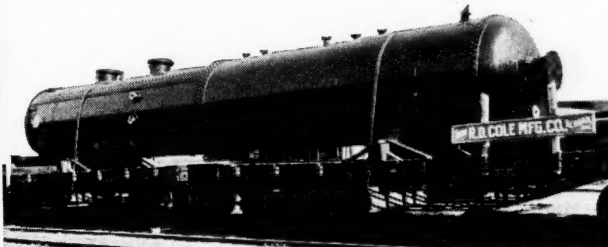
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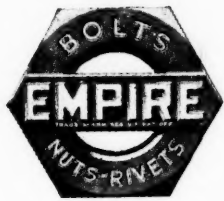
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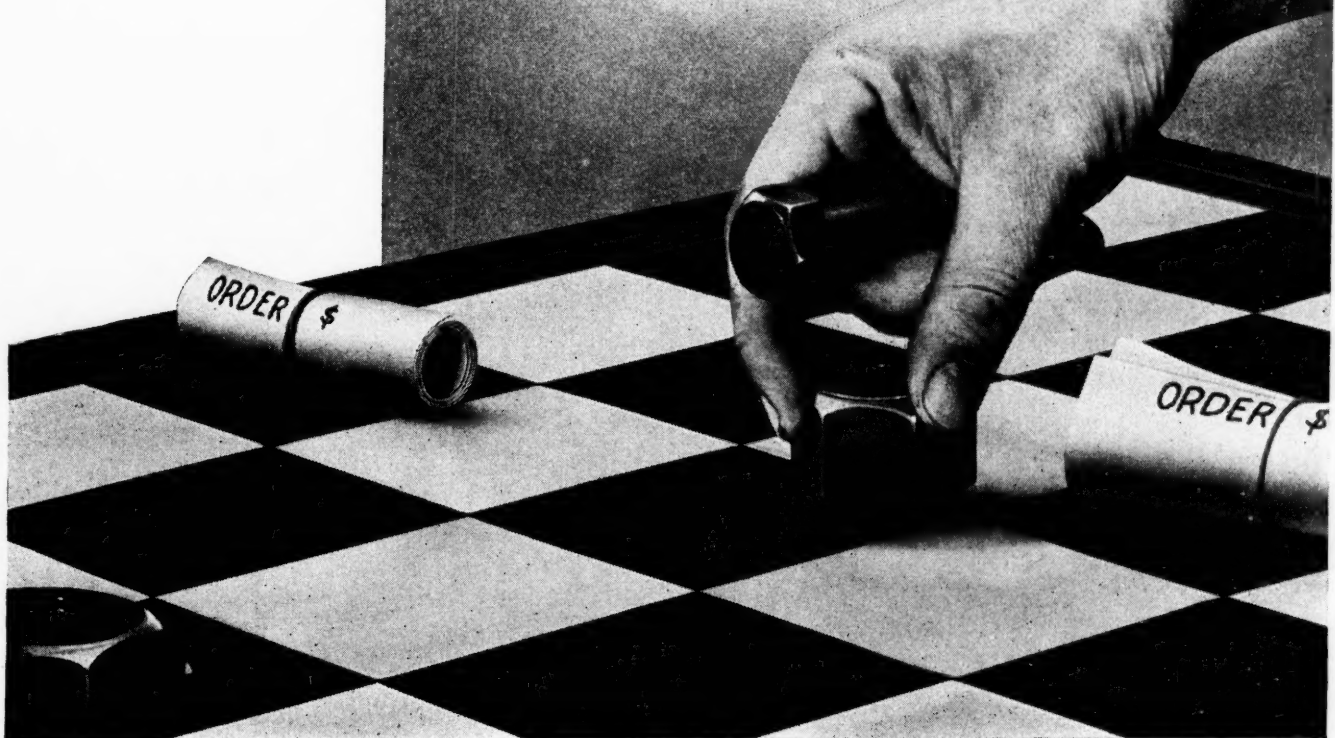
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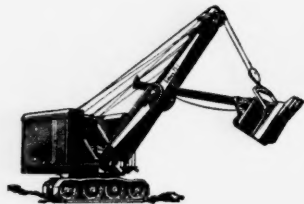
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